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PRINCIPLES AND PRACTICE OF PRIMARY AND SECONDARY PREVENTION IN DEMAND REDUCTION PROGRAMMES

State of knowledge in primary and secondary prevention

Report of the Secretariat

Summary

The present report was prepared pursuant to a request made at the thirty-eighth session of the Commission for a review of the evidence available regarding primary and secondary prevention of drug abuse. Much experience has been gained, over a period of many years, regarding primary and secondary prevention approaches. A great deal has been learned in relation to the methodological issues pertaining to the measurement and evaluation of programme effectiveness. There has been a concordance of findings with regard to many approaches and, as might be expected, a picture of mixed results has evolved with regard to the effectiveness of different approaches.

Primary prevention approaches include public awareness campaigns, perinatal and pre-school developmental interventions, in-school education, youth programmes and drug testing. Secondary prevention consists of reducing drug abuse through different forms of treatment and rehabilitation. In theory, and as practised by many States, aspects of both primary and secondary prevention operate parallel to, or in conjunction with, tertiary prevention approaches aimed at reducing health risks to persistent drug abusers. Theoretical and empirical evidence suggests that the efficacy of primary prevention is increasingly being called into question, while there appears to be evidence that secondary prevention can reduce demand, and result in abstinence, under some conditions. Although they have a high relapse rate, secondary prevention strategies have been shown by different studies to be cost-effective.

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INTRODUCTION

1. At the thirty-eighth session of the Commission on Narcotic Drugs, during its consideration of the provisional agenda for its thirty-ninth session, the Commission decided that the item on demand reduction should specifically target primary and secondary prevention of illicit demand, as well as the regional expert forums on demand reduction. The present report was prepared in response to that decision.

I. CONCEPTUAL ISSUES

A. The meaning and implications of primary and secondary prevention

2. The World Health Organization (WHO) defines primary, secondary and tertiary prevention as follows:[1]

Primary prevention is aimed at ensuring that a disorder, process or problem will not occur.

Secondary prevention is aimed at identifying and terminating or modifying for the better a disorder, process or problem at the earliest possible moment.

Tertiary prevention is aimed at stopping or retarding the progress of a disorder, process or problem and its sequelae even though the basic condition persists.

3. When applied to illicit drug abuse, primary prevention is the prevention of any illicit taking of a controlled substance. It is achieved through a wide variety of measures such as: the control of the illicit supply; strengthening the individual's self-esteem and resistance to peer pressure; providing alternatives to illicit drug abuse; and educating potential illicit drug abusers about the risks and likely problems associated with these activities, in particular the potential health risks deriving from intravenous drug use.

4. Secondary prevention aims at helping people who are illicit drug abusers to stop doing so. That may be achieved in a wide variety of ways, including the provision of pamphlets on how to cope with detoxification in private, drug-free counselling, and a range of treatment regimes, followed in some cases by rehabilitation programmes.

5. Tertiary prevention is concerned with limiting or reducing to a minimum some of the worst effects of disease or, in the present case, harmful behaviour. The aim may be to limit both the extent of physical illness and criminal behaviour, by providing information and education, substitute drugs, care and counselling, syringes or bleach. This form of prevention has a parallel with that of the legal drug nicotine: it has been accepted for many years that smoking low-tar cigarettes is preferable to smoking high-tar cigarettes, although the ultimate health goal is not to smoke cigarettes at all.

6. As emphasized by WHO, there is a need for integrated policies covering all these strategies. This approach was elaborated in a note by the Secretariat on basic principles of demand reduction (E/CN.7/1995/4) and is the policy adopted by many States. The integrated approach is encapsulated in the notion that primary prevention seeks to prevent the harms that secondary prevention seeks to terminate and that tertiary prevention seeks to reduce. The emphasis of the present report is upon primary and secondary prevention; however, in describing existing integrated programmes and approaches, it necessarily touches upon aspects of tertiary prevention.

B. Causes and correlates

7. An understanding of why an illicit demand for drugs develops in some segments of the population rather than in others may be an important factor in developing preventive strategies that influence potential or actual behaviour. The reasons put forward for why an illicit demand for drugs exists are extremely numerous. This is further complicated by the fact that the reasons for first taking an illicit drug, for continuing to do so on a regular or irregular basis, for becoming dependent and for continuing to be dependent are likely to be different.[2] Regardless of whether a programme is aimed at preventing initiation or continuance, it will be predicated upon a set of assumptions which may not always be articulated, but may be inferred, and which may not always match reality. A key factor in determining the success or failure of intervention programmes is the extent to which illicit demand for drugs is understood in terms of its meaning to the individual, the immediate social network of the individual, and the broader socio-cultural setting.

8. In addition to the different stages of illicit drug use, illicit demand can be significantly influenced by the drug type, its characteristics and effects. The reasons for taking methylenedioxymethamphetamine (MDMA), smoking opium or injecting heroin may be very different. The broader socio-cultural setting greatly influences the meanings ascribed to the behaviour, such as whether it is regarded as deviant or an acceptable practice for certain groups of people. This is especially true where there are long-standing cultural norms that are opposed to, or supportive of, the taking of a particular drug. It has also been found that the motivation for the illicit abuse of drugs varies considerably from one society to another but that, even within the same society over time, demand can shift as there is variation in the composition of user groups and the meaning attributed to illicit drug abuse.[3]

9. There have been many epidemiological and aetiological studies, typically in developed countries, of risk factors, or correlates, of illicit drug abuse. In many developing countries, accounts of indigenous drug use are found in the anthropological literature.[4] The table presents the main risk factors identified to date, which

are largely in relation to adolescents but, as suggested above, can be made relevant to a wider variety of societies by differential weighting. The table also provides the "protective" factors, which relate to individuals with a lower probability of developing an illicit demand.

Risk and "protective" factors for initiation of illicit drug use among adolescents

Risk factors	*"Protective" factors*
Individual factors	
Early and persistent problem behaviours	Resilient temperament
Alienation and rebelliousness	Positive social orientation
Attitudes favourable to illicit drug use	Intelligence
Early onset of illicit drug use	Behavioural skills
Family factors	
Family drug behaviour	Cohesion, bonding or warmth during childhood
Family management practices	
Low bonding to family	
Family conflict	
School factors	
Academic failure	School commitment to its pupils and a culture opposing illicit drug use
Low commitment to school	
Peer factors	
Peer rejection in elementary grades	Association with peers who do not use drugs illicitly
Association with peers who illicitly use drugs	
Contextual factors	
Availability	Norms, beliefs, behavioural standards opposing illicit drug use
Cultural norms	
Extreme economic deprivation	
Neighbourhood disorganization	

Source: Adapted from J. D. Hawkins, M. W. Arthur and R. F. Catalano, "Preventing substance abuse", *Crime and Justice: A Review of Research*, vol. 19, M. Tonry and D. Farrington, eds. (Chicago, University of Chicago Press, 1995), table 1, pp. 371-379.

10. For any given individual, the probability of initiation into illicit drug abuse appears to increase exponentially with the number of risk factors to which he or she is exposed.[5] Consequently, while there is great variation in the influence of different factors, aggregate exposure to risk factors is held to influence the level of incidence or proportion of initiates into illicit drug use in any given population.

11. Despite research into identifying factors that correlate with illicit drug use, there are at least four specific areas in which there is a dearth of knowledge. These can be summarized as follows:[6]

(a) Those risk factors that are predictive of the various stages of illicit drug use other than initiation, including continuation, progression within drug classes, progression across drug classes, regression, cessation and relapse;

(b) Causal pathways connecting risk factors to later illicit drug use;

(c) Interaction between risk and "protective" factors at different developmental stages;

(d) Reasons why most people who experience multiple risk factors do not end up illicitly using drugs.

However, it is despite these acknowledged limitations that targeting risk factors currently forms an important part of the approach to primary prevention in many countries.

12. The notion of risk factors has led to the suggestion that illicit drug abuse can be averted if risk factors can be avoided or reduced. The implications of risk factors for the development of primary and secondary preventive approaches are outlined in the subsections on making programmes effective, contained in sections II and III below.

13. In developing appropriate drug policy around the concept of risk factors, it is important to distinguish between causes and correlates. Simply because the factors listed in the table correlate with initiation does not mean that they are causal factors. Their amelioration will not necessarily reduce the level of initiation into illicit drug abuse, the prevalence or frequency of illicit drug abuse or the risk to the health and life of the illicit drug abuser. This is evidenced by the fact that illicit use, particularly frequent illicit use, of most drugs is a statistical rarity in most populations. Many persons exposed to the risk factors or correlates of the table do not make the decision to use illicit drugs. Also, some of the risk factors, such as exposure to peer pressure, imply a deterministic process, that is, that illicit drug users play a passive role in the process. Such interpretations of risk factors may ignore the possibility that it may be peer preferences rather than peer pressure that leads to illicit drug use.[7]

14. In the context of international drug policy, it is also important to note that the list of risk factors was developed in industrialized countries. It could be applied to other countries, including developing ones, but the weighting of factors would change. To account for solvent sniffing among street children, economic deprivation might be one of the strongest risk factors. In other countries it might be the patterns of traditional use or established illicit use that are the paramount reasons for illicit drug use. Elsewhere, economic gain could be a motivation, such as when stimulants are taken by truck drivers and taxi drivers to be able to work longer hours.

15. One of the problems often associated with theories of cause and the identification of risk factors is that they tend to ignore or downplay the benefits and pleasure derived from illicit drug abuse. As discussed below this may tend to discredit the "message-giver", that is, the persons or agency conveying a primary prevention message. One way of looking at illicit drug abuse is in terms of costs and benefits, which is a reification of the decision-making process. It should also be pointed out that the benefits are not objective benefits nor are the costs always objective costs, but those as perceived by the individual. For example, *basuco* smokers or cocaine snorters may not perceive the health risks and will therefore discount them.

16. The perceived costs and benefits of the decision to use drugs illicitly vary greatly by drug type and circumstance, but within these parameters, a few generalizations are possible. Some of the perceived potential benefits include pleasure derived directly from the psychopharmacological effects of the drug; pleasure derived indirectly through the perceived improved performance of the individual in different contexts; the thrill of indulging in "risky" behaviour;[8] and the social benefits that may be derived from being associated with a group or subculture in which illicit drugs are consumed.[9] Perceived potential costs of illicit drug use include the possible health effects of acute or chronic toxicity; the risk of arrest and punishment; the effect on academic or career performance; the danger, if caught, of being expelled from school or losing a job; the risk of resultant stigma attached to the label of illicit drug user; and individual feelings of guilt about defying parents, the law or a religious code. The relative weight of each of these factors obviously varies greatly depending on the time and place, the individual and the accuracy of the information upon which decisions are based, as well as the factors listed in the table.

17. As a result of the perceived costs and benefits and other influencing factors, the decision to use illicit drugs may be made on what are essentially rational grounds within the parameters of the information

available, similar to the manner in which many people continue the use and abuse of licit substances such as alcohol and tobacco, with an acknowledgement of the potential health risks involved.[10]

C. Measuring effectiveness

18. Interventions, whether in the form of advertising campaigns, education, peer pressure, advice and counselling, treatment or rehabilitation, can be effective, but measuring the extent of the effectiveness, particularly in the short term, is methodologically complex. In some instances, evaluation has proved more costly than the intervention itself.[11] Measuring the effectiveness of an intervention that is designed to change behaviour is difficult to undertake with precision. In many instances, information relating to the array of influences upon people's lives and decision-making are neither known nor controllable. Nevertheless, because of the desire to demonstrate that money has not been wasted, measures of programme outcomes are used as an alternative indicator. Such indicators should not be confused with measures of effectiveness of the impact of a particular intervention strategy. With respect to measurement and evaluation, a Popperian paradigm is appropriate because it is often the case that, while it is difficult to measure or know what is effective, it may be possible to measure and know what is not effective.[12]

19. Experience in the area of human immunodeficiency virus (HIV) prevention and tobacco use indicates that a long-term series of interventions carrying the same message have a greater likelihood of impact than a single intervention. There has been a noticeable and measurable change in the behaviour of people injecting drugs and homosexual men in some parts of the world, where sustained interventions have taken place to prevent the spread of HIV. This has mainly been because the messages and help were delivered by credible and trustworthy sources and involved the very people who were being targeted.

20. There are several basic questions that can be asked of any intervention, including whether it has reached the intended audience and, if so, whether or not the message has been understood. If the message has been understood, then the question arises as to whether it has been believed, whether services that are provided have a clear target population, whether it is the most appropriate target population and whether it has been reached. Such questions delineate many of the areas that are prerequisites to the implementation of an approach, subsequent to which its impact upon behaviour would be evaluated. The evaluation of effectiveness can be particularly problematic in instances where universally agreed criteria do not exist for the determination of effectiveness, such as in the measurement of treatment effectiveness.

21. Two indicators are often used to justify drug prevention programmes. These are the number of people reached by the programme and the amount of information imparted to the recipients. Neither indicator measures programme effectiveness. Many programmes, such as national advertising campaigns and drug education programmes in schools, are proclaimed a success if they reach, or are known by, a large number of people. However, with regard to effectiveness, most national drug advertising campaigns fail if their intention is to change behaviour, primarily because they are too broadly targeted. They may, however, have alternative, unarticulated goals, such as raising public awareness about the extent of illicit drug use, the danger to children and young people and the need to do something about it such as providing treatment facilities. In many societies scarce resources are channelled into health and social problems that are more pressing than illicit drug use. Even in highly developed countries, the use of limited public resources for people who are seen as lawbreakers and the architects of their own problems is not always universally popular. Thus, some national campaigns may have the overt point of trying to prevent illicit drug abuse, but have a secondary objective of persuading a reluctant public of the importance of spending money to help illicit drug abusers.

22. Research suggests that increasing the information that people have does not affect behaviour. Having more information does not mean that young people will take decisions in accordance with the views of the providers of that information.

23. There is a considerable wealth of literature on evaluating treatment.[13] Many of these evaluations are contradictory in their outcomes. This is because the classical design for testing differences between different treatments (random assignments to treatment and non-treatment groups) cannot be used for ethical reasons. Even in the few cases where it has been effective, the numbers have generally been too low or the sample too unrepresentative to draw firm conclusions.[14] It has also been noted that evaluation studies continue to suffer from massive design problems.[15]

24. Many studies compared within-treatment conditions, thereby testing patients on a number of variables (such as extent of illicit drug abuse, amount of crime committed, employment record, health status) before entering treatment, during treatment and after treatment.[16] This methodology, however, has been subject to criticism on the basis that the period immediately before treatment is when the drug-dependent person will score higher on a number of measures than he or she would have, say six months previously.[17] There have been some attempts to overcome this problem using a longitudinal approach, but the cost of this methodology is great and the difficulties involved in long-term follow-up are considerable.[18] A related factor is that, while there is a growing convergence as to which core indicators should be included in evaluations, there is still no consensus.[19]

25. Apart from methodological issues, there are also issues concerning the goals of treatment. The goal of abstinence as a single or overriding goal has been discussed extensively in the literature.[20] It has been suggested, however, that "getting addicts completely off opiates, or all illicit drugs, is only one criterion of success. Their criminal behaviour, psychiatric difficulties, or other aspects of their lives cannot be ignored. As a consequence of diverse lifestyles and attendant problems, it is necessary to measure improvement in a number of respects ... To the extent that a treatment modality produces improvement, it is more or less effective. Consequently, treatment effectiveness is not a matter of success or failure, but a question of how much improvement, for how many patients, over how much time."[21]

26. As soon as intermediate goals and outcome measures other than immediate cessation of illicit drug abuse are used, then the discussion becomes one of using the concepts of tertiary prevention. In reality there is a continuum from primary through secondary to tertiary prevention. Whether acknowledged or not, there are many benefits to the individual and the community that can be achieved on the road to achieving a drug-free state. In pursuing, in all circumstances, a goal of being drug-free, there is a danger that many of the other benefits of the intervention are overlooked and that an intervention may be judged as unsuccessful when it in fact achieved a great deal, be it only for a short period of time.[22] Data from the United States of America, where perhaps the most research in this area has been conducted, show that there is an overall relapse rate of 80 per cent after three months of ceasing treatment. This could equally be interpreted as a success rate of 20 per cent, with individuals needing repeated treatments, but it is also possible that during the treatment period and the time prior to relapse, there are distinctive benefits for the individual and society.

II. PRIMARY PREVENTION

A. Making programmes effective

27. The principles outlined above dictate that primary prevention must be tailored to specific drug types in specific contexts. For example, a campaign that either explicitly or implicitly groups cannabis smoking with intravenous heroin injection loses the credibility of the message since it is widely known that the two entail different potential morbidity and mortality risks.

28. The first principle in making programmes effective is that they should relate to the needs, beliefs and perceptions of the target audience. If programmes or policies are out of touch with the group of people whose behaviour they are to influence then it is not surprising if they are ineffective.[23] There are difficulties in gaining access to some illicit drug abusers, but these are not insurmountable.[24]

29. Once the target population is known, one approach is to try to ameliorate many of the risk factors listed in the table. This is commonly accepted as a goal of educational, welfare and other areas of social policy, regardless of drug policy objectives. These would include early and persistent problem behaviour, alienation and rebelliousness of the individual, family management practices, low bonding to family, family conflict, academic failure, low commitment to school, peer rejection, extreme economic deprivation and neighbourhood disorganization. As such, they do not lie solely within the domain of drug policy. For example, many of the risk factors that correlate with an illicit demand for drugs correspond with those identified by research into juvenile delinquency and "criminal careers" for some types of crime. With respect to the development of primary drug prevention programmes, it is significant that recognition of correlates of initiation does not necessarily make them appropriate as factors to be targeted by drug policy.

30. Within the parameters and acknowledged difficulties outlined above, a range of primary prevention programmes have been developed. Reducing risk factors, as well as increasing preventive factors, is an attractive starting-point for the development of preventive interventions. The basic principles for designing primary preventive interventions are as follows:[25] (a) focus on known risk factors; (b) when reducing risk, enhance known protective factors; (c) address risk and "protective" factors at appropriate developmental stages; (d) intervene early, before the target behaviour stabilizes; (e) include those at high risk; and (f) address multiple risk factors with multiple strategies. The principles are briefly described below. Some or all aspects of this framework are implicit to many of the efforts to date in primary prevention.

B. Types of programmes

1. Public awareness campaigns

31. The use of the mass media for spreading information and propaganda has an impressive and well-documented history in changing attitudes and behaviour across a range of areas of public life. Effectiveness need not necessarily be based upon the provision of a rational argument or correct information. The bulk of evidence in relation to political history and the advertising industry suggests that programme effectiveness is determined by five criteria: the credibility of the message; the credibility of the message giver; the means of message delivery; the absence of a strong countervailing message; the absence of alternative sources of information that might contradict the propagated message. The importance of each factor varies according to circumstance.

32. Public awareness campaigns are aimed at changing social norms related to illicit demand. The principal technique of public awareness campaigns for both primary and tertiary prevention is dissemination of information via media advertisements, including on television, radio and public notice-boards, and in newspapers, magazines and information leaflets. Both the requirement for, and the capacity to implement, such programmes are dependent upon local circumstances, which vary greatly from State to State. In terms of achieving prevention objectives, it does not necessarily follow that public awareness campaigns are wholly educational or factually correct.

33. Most primary prevention campaigns have to compete in the same arena as cultural and other influences that stimulate or condone illicit demand. The frequent association of illicit drugs with media personalities, such as popular artists, can make them appear attractive to potential illicit drug users through association with the positive qualities of the personalities involved. Similarly, equipment and expertise required for illicit production are widely disseminated. Hydroponic growing equipment is openly advertised since it has licit as well as illicit uses. "Recipe books" for amphetamine-type stimulants and "home-grown cannabis tips" are examples of information that are increasingly becoming widely available through the electronic media or in published book form. Both proponents and opponents of illicit drug use can adopt a proselytizing position. When combined with the economic incentive underlying the traffic in and sale of illicit drugs, it seems that information outlets promoting illicit drug use are likely to continue, possibly expanding in line with the global spread of such technology and access to information.

34. It has been suggested that public information campaigns have, in some instances, had an effect that is the reverse of the one intended, as in the United Kingdom of Great Britain and Northern Ireland, where the "Heroin screws you up" campaign, promoted across a range of public media, was independently evaluated to have had no preventive effect.[26] The possibility that public awareness, educational or other material designed to prevent or reduce illicit demand may draw attention to the availability and means of abuse of prohibited drugs within certain segments of the population is a difficult issue that remains to be resolved.

35. Some survey indicators from the United States suggests that there has been an overall reduction in demand in the past few years within some segments of the population.[27] Whether these can be explained in terms of an impact of primary prevention measures is, however, an unanswered question, as it has been suggested that a variety of factors may have been of influence, including reductions in the willingness of survey respondents to report illicit drug abuse.[28] Simultaneously, other indicators have suggested increased illicit demand within drug-abusing segments of the population.[27] There have been more general moves towards healthier lifestyles, reductions in licit nicotine consumption and aggregate changes in lifestyle that may have indirectly influenced the perceived attractiveness of illicit drug use. Aggregate shifts towards healthier lifestyles, including reduced nicotine consumption, reduced consumption of meat and increased physical activities, may also have been interpreted by some as requiring reduced consumption of illicit drugs.

2. Perinatal and pre-school developmental programmes

36. Perinatal and pre-school programmes designed to target specific risk factors have recently been promoted as a means of reducing illicit demand among children later in life. In general, however, they target the more general rather than drug-specific risk factors. Consequently, rather than being specific to illicit drug abuse, they attempt to ameliorate factors identified for targeting by social policy initiatives, such as social deprivation, child welfare, health and educational issues. While there may be a fairly general consensus about improving these social problems, if not about the means to achieve this end, the objective of preventing the onset of illicit drug use forms only a relatively minor component.

37. Perinatal programmes involve interventions focused upon pregnant women and neonates that are designed to reduce illicit drug use among the children concerned many years later. This involves targeting risk factors such as economic deprivation and influences upon the health and development of children. In addition, prenatal exposure to illicit drugs and factors such as premature birth, low birth weight and poor relations between the child and care-giver in early childhood have been identified as problematic in relation to later development and, consequently, as precursors of the risk factors listed in the table above.[29] Pre-school interventions involve reducing risk and enhancing protective factors in early childhood. These include promoting learning, language and social skills needed later in school.

38. The number of statistically adequate evaluations of these approaches to date is limited. To some extent this is because of the long follow-up period required to measure whether developmental interventions have an impact, over a decade or two later, upon the illicit drug use of the children involved. However, the absence of evaluations may also reflect the fact that the prevention of illicit drug use is often only a secondary aspect of more general social improvement programmes. There are recorded instances of pre-school interventions that have reduced risk and improved social behaviour in schools, but these have not, to date, even been evaluated in terms of their impact upon illicit drug use.[30] While improvements in perinatal services and pre-school education may be meritorious, the mechanism through which illicit drug use in adolescence or later is prevented is weak because of the influence of a vast array of mediating variables in the intervening years.

3. In-school education

39. In-school education typically provides two types of approaches to the problem of illicit demand: providing information with a view to changing attitudes and then behaviour; and providing support for the

individual in order to enable him or her to develop skills for coping with life and resisting peer pressure to take drugs.

40. The fear or shock tactics that were once employed have now largely been abandoned because they have proved to be counter-productive. The credibility of the information giver is compromised if the information is known to be inaccurate when comparisons are made with information and knowledge of the recipient, and so the message and all future messages are then disregarded. The more prevalent the abuse of drugs by young people, the more the fear approach will rebound because they have access to alternative sources of information. The provision of information alone does not appear to affect drug-abusing behaviour. Other approaches include refusal skills, social skills and decision-making skills, and the enhancement of self-esteem. In addition there has been the promotion of alternatives, that is, the provision of activities that compete with illicit drug abuse for excitement.[31]

41. There has been a steady increase in the number of in-school drug education programmes and a gradual shift in their focus, away from specific isolated talks from outside experts and towards teacher-led programmes that address the issues of healthy lifestyles, where illicit drug use is put into a wider context. Simple information programmes have been shown to be ineffective. Research in various countries has consistently demonstrated that increased knowledge has virtually no impact on substance use or on intentions to engage in tobacco, alcohol or drug use in the near future.[32] The broader approach to drug education has shown that it is possible to delay the onset of first drug use, which is strongly related to the development of more frequent later use that becomes problematic in health terms. It has been suggested, for example, that tobacco, in particular, appears to be an important drug that may well act as a gateway or entry point for drug use further along the developmental continuum.[33]

42. Many school-based prevention programmes have been hailed as effective. An analysis of two large-scale evaluations of social influence programmes, the life skills training programme and the WHO collaborative study, concluded that it could not be assumed that a statistically significant difference observed at follow-up between an intervention group and a control group was necessarily of any practical significance.[34]

43. A meta-analysis of 143 adolescent drug prevention programmes found that peer-led programmes were superior to other approaches. Peer programmes produced the only results that showed change towards the ultimate aim of reducing drug-abusing behaviours. It was found that the assumption on which most drug education programmes were based, namely that in order to change behaviour attitudes needed to be changed, was not confirmed. Drug use patterns changed without a concomitant change in attitudes.[35] It seems that a drug education programme combining both peer-led, developmental skills and educational approaches yields promising results.[33] In the development of peer-group leader programmes to tackle illicit demand for amphetamines in the United Kingdom, while in an out-of-school context, it was found that peer-led programmes might be successful as a means of deterring the use of heroin, or the transition to injection, but that peer interventions were much less likely as a means of primary prevention.[36] That finding suggests that serendipitous gains, in terms of the goals of tertiary prevention, may be derived from such an approach.

44. There is conflicting evidence concerning the efficacy of alternative activities as a substitute for illicit drug abuse. Despite particular suggestions that it is ineffective, the meta-analysis concluded that such activities were successful for special population groups; they were intensive and involved costly programming, but they did change the behaviour of a nearly implacable population.[35]

45. In the United States, the Drug Abuse Resistance Education (DARE) programme may hold many important lessons for in-school primary prevention. Specially trained police officers are employed to educate schoolchildren in strategies to resist initiation into illicit drug use, influencing their attitudes, beliefs and behaviour.[37] The primary objective of the DARE curriculum is to teach peer resistance skills by offering students a package of strategies to say "no" to drugs. Created in 1983 at Los Angeles, the DARE programme has spread to all 50 states in the United States and to six other countries. Its rapid growth indicates how it

has widely been accepted as the state of the art in primary in-school prevention; several preliminary evaluations, which were widely publicized, yielded favourable results,[38] including evaluations of specific projects such as project SMART[39] and project ALERT.[40] Many of the preliminary evaluations of DARE that had shown favourable results are now known to have embodied limitations because of a variety of methodological problems, such as those described earlier in the present report in relation to measuring effectiveness. In an evaluation in 1994 it was noted that, "generally speaking, the methodological weaknesses have been substantial and include the use of non-randomized designs, the absence of pretest measurement, small sample sizes, unreliable measurement, and a lack of statistical controls in the analysis".[41]

46. The large sample size employed in a later longitudinal randomized experiment has the status of being probably the most statistically powerful and sophisticated evaluation of the in-schoo! primary prevention approach to date. The independent evaluation, published in 1994, concluded that, contrary to popular belief and theory-based prediction:

> "The effectiveness of the programme has yet to be demonstrated ... DARE had no statistically significant main effects on drug use behaviours and had few effects on attitudes or beliefs about drugs."[42]

47. A review of drug education in over 100 schools in Scotland drew similar conclusions on much of the work in the United States. The evaluation report concluded: "A series of process measures suggested that pupils have some positive perceptions of drug education. However, the outcome measures showed little impact of drug education."[43] At the same time, the report also concluded that, "nonetheless, it is worth noting that for the bulk of the pupils in the study illegal drug use was not part of their lives ... It is also important to note that drug education was not associated with increased drug use on any measure".[43]

48. The conclusions on the work with respect to in-school primary prevention were that it might benefit from being more focused upon factors directly relating to illicit drug use rather than more general social skills and self-esteem training, since the broad variety of approaches might water down rather than enhance resistance strategies. In practice, however, it is possible that other aspects of such an approach that are not specific to drugs may achieve the additional objectives of social and educational policy. In one evaluation it was also noted that positive outcomes were not guaranteed merely because a programme was pro-social in nature, with wide support and extensive investment of resources.[44] Where there is an absence of a coherent policy, teachers may end up by adopting innocuous, and even counter-productive, prevention practices.[45]

49. In-school drug education programmes experience some difficulties with respect to targeting the population most likely to undertake illicit drug use. There is evidence that truants are also more likely to engage in illicit drug use, as well as other forms of juvenile delinquency, which poses methodological problems for school surveys of illicit drug use, as well as for interventions. If those most at risk are not in school then school programmes may appear to be effective because those most likely to use drugs illicitly are not part of the school programme.

4. Youth programmes

50. Components of youth programmes that relate to awareness-raising and the education of youth with respect to drug issues are covered elsewhere in the report. Consequently, the focus of the present subsection is upon the diversionary aspect of youth programmes designed to reduce the opportunity for drug abuse by increasing the proportion of time spent in alternative, licit activities. The main problems faced by this approach are that the preventive mechanism is not focused upon the target population or is not sufficiently powerful to reach the goals of primary prevention.[46]

51. Many youth programmes, such as youth centres and extracurricular sporting or other activities, are general rather than focused in their approach. Without distinguishing between high-risk and low-risk youth, the bulk of resources are expended upon those who, even without the approach, would not have generated any illicit demand for drugs. Furthermore, those youth who were most at risk were also those who were least likely to enter into youth programmes.

52. Where alternative programmes target special population groups, however, their success rate is high, equal to the peer-led programmes and with better results than conventional drug education programmes.[35] The successful programmes are those that have been individualized to meet the needs of each client and those that have included activities to enhance personal competence, such as reading skills and job skills, as well as physical adventure.

5. Drug testing

53. Four principal reasons for using drug testing as a means of determining whether a person has taken illicit drugs are to deter, to check compliance, to test competence and to measure trends in demand. It is believed that if there is a testing programme then illicit drug abuse will be deterred, particularly if it affects employment status. Drug testing can therefore be classified as both primary and secondary prevention since it may deter initiation and encourage cessation. It can also check compliance with a treatment regime and test for competence in operating machinery or vehicles. The latter is deemed most important where the competence of the operator will affect many other people, as in the case of airline pilots, sea captains, bus drivers or anyone who has the care of others under their charge. Whether or not the tests deter is a matter of great controversy.[47] The most intensive and successful testing programme has been in the United States navy,[48] but whether this would apply to other populations, particularly prison populations, is another matter.[49]

54. Some drug testing techniques have been the subject of debate regarding reliability. Most are initially of the immunoassay type, which can only be verified by gas chromatography coupled with mass spectrometry.[50] This is not frequently done, particularly because of the cost involved, and so decisions are taken on the basis of testing that can yield false positive information, that is, the incorrect identification of some persons as illicit drug abusers.

III. SECONDARY PREVENTION

A. Making programmes effective

55. Rather than one form of a programme being more effective than another, there is growing evidence that it is fitting the programme to the needs of the individual and the quality of service delivery, rather than the type of service, which brings about effectiveness. Thus, the flexibility of the programme, the quality of the staff and the morale of patients and staff may have a greater influence on outcome than the actual nature of the service delivered.[51] There is also the perennial problem of determining what is effective. There are no agreed measures of success. Many treatment programmes count as successfully treated any patients who complete their time in treatment; thus, if the patients are drug-free on the day that they leave the programme, they are counted as being successfully treated. Other regimes only define a treatment as successful if the patient is drug-free for a specified time period. Again, there is no agreed length of time. Some follow-up studies take three months, others six months and yet others three years. Nor is there agreement as to what behaviour constitutes success. For example, if a person had been through a detoxification programme for addiction to heroin, but afterwards smoked cannabis, would that be a success or failure? If, alternatively, the person became a heavy alcohol drinker, would that constitute failure?

56. The treatment and rehabilitation modalities of secondary prevention were developed primarily in relation to licit and illicit demand for opiates, notably heroin. More recently, secondary prevention approaches have been used in relation to reducing the illicit demand for other dependence-inducing drugs where a drug-dependent population can be identified. It is important to note that the bulk of the illicit demand for some prohibited drugs, such as cannabis, lysergic acid diethylamide (LSD) and the MDMA "ecstasy" group, is not covered by the secondary prevention approach. For such drugs, reduced consumption is usually aimed at tertiary prevention approaches that highlight the possible negative health consequences related to acute and chronic toxicity that may stem from binging, frequent and continued illicit consumption.

57. The implementation of treatment and rehabilitation is dependent upon reaching the target population of illicit drug users. The typical channels of access are through the medical system, via doctors and hospitals with whom illicit drug abusers have contact. Outreach and community work is also used to make contact with users and is sometimes combined with tertiary prevention activities. There is evidence that outreach work based on tertiary prevention may reach more marginalized segments of the population, with a higher prevalence of intravenous use.[52] It is therefore possible that, in some instances, the credibility of tertiary prevention techniques that seek to help reduce the health risks to individual users may provide an inroad or gateway for the implementation of secondary prevention aimed more directly at reducing the level of illicit demand.

58. A recent independent study examined the cost-effectiveness of prevention programmes, notably outpatient and residential treatment programmes, in relation to supply reduction strategies as a means of reducing illicit consumption. Cross-strategy comparative analysis has been hardly utilized in many areas of drug policy. The limited evidence available suggests that this may prove a promising avenue of investigation. The study concluded that the least costly supply-control programme (domestic enforcement) cost 7.3 times as much as treatment to achieve the same consumption reduction.[53] While the state of knowledge in relation to this particular analytic perspective is currently limited, it may in future years provide an interesting vein for the analysis of resource allocation with respect to prevention and supply reduction activities at the national and international levels.

B. Types of programmes

59. Treatment for illicit drug users is varied, ranging from methadone maintenance (or long-term detoxification), detoxification, therapeutic communities, drug-free counselling and Ayurvedic medicine to acupuncture. The effectiveness of treatment is highly dependent on tailoring the treatment to the needs of the patients, both in terms of the type of drug being illicitly used, the pattern of illicit use (occasional versus dependent, oral versus injecting illicit drug use), the needs of the individual and the cultural setting in which the illicit use occurs. The type of treatment available is usually dependent on what is culturally acceptable and who or which professions are charged with the management of the problem. In countries where psychiatrists are responsible for treatment, psychotherapeutic approaches and medical models prevail; where dependent illicit drug use is regarded as a result of a spiritual condition, greater emphasis is put on this aspect of human behaviour.

60. It is generally acknowledged that there are different approaches that are relevant for the non-dependent and the dependent drug user. The dependent drug user suffers from a chronic relapsing condition, involving biological, socio-cultural, economic and psychological factors that all contribute to drug abuse.[54] The treatment of illicit drug use is thus not a simple medical issue but involves a wide spectrum of social considerations.[55] The initial part of the present subsection presents a discussion of treatment techniques that have evolved in developing countries, for which there is a relative dearth of statistically adequate evaluations available; the bulk of the subsection presents a discussion of alternative pharmacological choices to proscribed drugs. These are followed by a short subsection on rehabilitation.

61. As with many aspects of drug policy, the variety of prevention approaches in developing countries that have been comprehensively evaluated are less numerous than those in developed countries. There is consequently somewhat of a dearth of knowledge regarding the nature, impact and effectiveness of the wide variety of treatment approaches that exist. Traditional medicines, the content of which varies with culture and context, are used in a number of countries. Independent reports have noted that Ayurvedic medicine has been used in some instances in India.[56] In other countries, such as has been independently reported in Malaysia, traditional healing as a means of treatment of dependence is sometimes based on beliefs that persons are vulnerable to supernatural influences, as well as physical causes, which increase the probability of dependence arising.[56] In such instances, traditional healers focus upon the well-being of the individual, and detoxification involves the use of herbal medicines, physical exercise and the promotion of physical health.

62. The role of acupuncture in the treatment of dependence has become more widespread in recent years. In the detoxification process for opiates, acupuncture has been used in, *inter alia*, Hong Kong and Viet Nam, and reputedly in the United States.[56] Traditional Chinese acupuncture techniques have been used extensively in some areas of the United States for several years, where it has been suggested that acupuncture relieves withdrawal symptoms, prevents the craving for drugs and increases the rate of participation of patients in long-term treatment programmes. The best results have been obtained in an open-group setting using acupuncture points in the external ear with needles without electrical stimulation.[57] There is related literature on the use of meditation techniques in treatment.[58] In other settings, and in other States, including India, yoga and meditation have been utilized as part of behavioural treatment and rehabilitation programmes, with the aim of assisting relaxation and aiding the development of a positive physical and mental approach during the treatment and rehabilitation process.[59]

1. Opioid alternatives

(a) Methadone

63. The first documented clinical trial in which methadone hydrochloride was used for treating heroin addicts was published in 1965.[60] Subsequently, methadone was gradually introduced as an alternative to heroin for the treatment of heroin-dependent persons. Overwhelmingly, both for withdrawal and long-term maintenance, methadone is currently the main drug used by physicians to treat heavily dependent persons in developed countries. A recent detailed study on the effectiveness of methadone maintenance supported the findings of a large number of already conducted studies, concluding that "methadone maintenance treatment is effective in reducing drug abuse, crime, and other deviant behaviour among patients who stay in treatment."[51]

64. In the study cited in the previous paragraph it was also noted that there was enormous variation between methadone maintenance programmes, the prescription of methadone being the only common factor. There are variations in the addicted patients, the nature of the programme, the actual services provided and patient outcomes. However, programmes in which prescribing was embedded in broader treatment, care and rehabilitation programmes were found to be more effective than programmes in which that was not the practice.

(b) Levo-alpha-acetylmethadol

65. Levo-alpha-acetylmethadol (LAAM) has also been examined as an alternative to the prescription of methadone since the 1960s. In the United States, LAAM was formally approved as a drug for the maintenance treatment of opioid dependence in 1993. "LAAM is a synthetic opioid analgesic with actions qualitatively similar to morphine that affects the central nervous system and smooth muscle. As with opioid agonists, principal actions include analgesia and sedation. Tolerance to these effects develops with repeated use. An abstinence syndrome generally occurs on cessation of chronic administration of LAAM similar to that observed with other opioids, but with slower onset, more prolonged course, and less intense symptoms ...

The opioid effect of LAAM is slower in onset and longer in duration (up to 72 hours) than that of methadone (24 hours)."[61]

(c) Buprenorphine

66. One new substitution agent currently being investigated for use in opioid addiction is buprenorphine. It is a partial agonist at some opioid receptors and an antagonist at another. It is a highly effective analgesic, 25-40 times more potent than morphine. There have been a number of studies comparing the use of buprenorphine with that of methadone in double-blind trials. The conclusions were that "for patients who require long-term maintenance treatment, many will do well on buprenorphine"[61] but that it was not suitable for all patients, particularly those with a high level of tolerance.

(d) Substitution pharmacotherapies for opioid addiction

67. One of the main reasons for choosing one drug rather than another is the length of time during which it is most effective, an indicator of which is its half-life. The half-life of a drug provides a measure of irreversible drug loss from the blood.[62] When heroin is absorbed into the body it is metabolized into monoacetylmorphine and morphine: the half-life of heroin is 3 minutes; that of morphine, 2-3 hours. Methadone has a half-life of 10-25 hours, with a mean of 15; however, after long-term maintenance this rises to 13-55 hours, with a mean of 30. It follows therefore that methadone needs to be administered less frequently than heroin. If the drugs are to be administered intravenously, the number of daily injections needed will be three or four for heroin and one or two for methadone, given equivalent dosage levels. Physical damage, especially where the patient is self-injecting, is therefore reduced with methadone. Methadone is said not to produce a "high", which the addict would get by using heroin. The half-life of LAAM is between 30 and 65 hours, with a mean of 50, which is one reason why there has been so much interest in this drug. The half-life of buprenorphine is 4-6 hours.[63]

2. Non-opioid alternatives

(a) Ibogaine

68. Ibogaine is one of the psychoactive indole alkaloids found in the western African shrub *Tabernanthe iboga*, and numerous anecdotal observations have claimed that it possesses "anti-addictive" properties. It is claimed that this is a rapid and easy means of interrupting addiction not only to opiates, but also to cocaine, amphetamine, alcohol and nicotine and polydrug dependency syndrome. Preclinical studies demonstrating that ibogaine reduces self-administration of both cocaine and morphine and attenuates the symptoms of morphine withdrawal support this hypothesis.[64] At present ibogaine is also being used on an experimental basis. The same studies conclude that although the efficacy of the drug cannot be rigorously assessed in the absence of appropriately controlled studies, interest in ibogaine as a treatment for addiction has increased.

(b) Naloxone and naltrexone

69. Other alternative treatments have been tried, such as the use of drugs that have the power to reverse opiate effects, the antagonists, such as naloxone and naltrexone. A few experiments with naloxone have not yielded conclusive results, but naltrexone appears to be a useful adjunct to treatment for specific groups of people, such as recovering physicians and others in professional occupations as well as people with higher socio-economic status. Naltrexone can only be administered to people without any opioids in their system; therefore it cannot be prescribed for those first seeking treatment. The patients need to be drug-free for 5-7 days for heroin and for 10-14 days for methadone. It has been suggested that the success of naltrexone in keeping those with higher social status from relapsing is partly due to the negative consequences that will result from readdiction.

(c) Clonidine

70. Clonidine is an alpha-adrenergic agonist that suppresses opioid withdrawal. It can be used for short-term opioid detoxification. "The role of clonidine for the treatment of opioid addiction is limited to the first several weeks of withdrawal. Clonidine cannot be considered a sufficient treatment for opioid addiction because relapse rates following all forms of detoxification are extremely high. Clonidine can only be viewed as a transitional treatment that can be used in situations where methadone is unavailable, unacceptable or inappropriate."[65]

(d) Other drug treatments

71. Sometimes, in order to ease the problems associated with the withdrawal syndrome, such as insomnia, other medicines are prescribed, such as benzodiazepines, but usually only for a short period of time.

3. Drug-free treatments

72. Drug-free treatments include therapeutic communities and out-patient drug-free treatment, where counselling, group therapy, information or support may be provided. Acupuncture and Vedic medicine may be effective for some groups of people, but large-scale controlled evaluations have not been undertaken.

73. The therapeutic community approach was developed in 1958 with the establishment of Synanon in the United States. Many programmes have developed since and the concept has spread to many countries. Patients are required to live totally within a community for periods ranging from 90 days to several years. They therefore have to cease employment, if employed, and leave their homes and families. The treatment goal is to strip away the fundamental personality characteristics of the addict and to help the recovering person rebuild new behaviours, attitudes and values, in order to maintain lifetime abstinence from alcohol and other drugs and to develop a major orientation of lifestyle.[65]

74. Evaluations of this approach have shown it to be effective for those who complete the programme. However, only a small proportion of addicts are willing to undergo this treatment and there is a high drop-out rate at the beginning of the programme. Additionally, this form of treatment is extremely costly. The two principal factors determining this cost are the length of the treatment and the necessarily high ratio of staff to patients.

4. Rehabilitation

75. Within the secondary prevention approach, treatment and detoxification are sometimes followed by rehabilitation. Rehabilitation is typically for persons who have been through the treatment and detoxification process and is aimed primarily at reintegrating the individual into the community. This aspect of secondary prevention can take on various forms of advice and assistance and can involve skills training and social reintegration. Advice and assistance typically include help in searching for employment and as such have been the focus of efforts by the International Labour Organization. To the extent that rehabilitation may reduce the risk factors associated with the lifestyle prior to drug dependence, it may assist in preventing relapse into illicit drug abuse.

76. Rehabilitation efforts can target drug-dependent persons who have not undergone prior treatment. In these instances, rehabilitation and social reintegration are aimed at restoring the state prior to the onset of illicit drug abuse.[56] However, for other persons, particularly younger illicit drug abusers, rehabilitation and integration may imply attempting to develop a living situation that has not previously been experienced.

IV. RELATIONSHIP BETWEEN PRIMARY AND SECONDARY PREVENTION

A. Participants

77. There is considerable overlapping of secondary prevention with both primary and tertiary prevention. The overlapping with primary prevention exists in so far as many of the programmes and techniques used to try to prevent initiation are also used to attempt to induce cessation among occasional or even frequent illicit drug abusers. The overlap between secondary and tertiary prevention occurs because it is difficult to draw a clear conceptual line between where secondary prevention ends and tertiary prevention begins, as is often reflected in practice. When treatment includes goals other than and in addition to complete abstinence, the treatment encapsulates aspects of tertiary prevention, reducing morbidity and mortality rates among illicit drug abusers; the exclusion of such objectives from secondary prevention reduces cost-efficiency and, in effect, contradicts the principles underlying the health and medical systems of many States.

78. Participants in the development and implementation of primary and secondary prevention policies are from among most sectors of society. The organization or arm of government that takes the lead varies from country to country, but the most successful programmes appear to be those based upon partnerships between different sectors of society. It appears that in working together, the strengths of each reinforce the other. The least effective programmes are those in which different sections of government or government and organizations compete for "ownership" of a problem and the right to determine policy. Inter-agency and inter-organizational cooperation and collaboration, encompassing organizations ranging from the local to the national level, appear to provide the conditions most conducive to the development of effective programmes.

79. Government agencies and organizations, at all levels of representation, are among the more important participants in the development and implementation of prevention programmes. Organizations with a national perspective and structure have advantages in the development of a national plan, which can be tailored to local needs through coordination with regional and local agencies. Such a structure assists in the maintenance of a comprehensive and consistent national perspective while being sensitive to, and being integrated with, local needs, requirements and communities. This is particularly important since the majority of projects and programmes, such as those in schools, are implemented at the local level. While these may be initiated and coordinated at the national level, it is primarily media campaigns that are organized almost solely at the national level.

80. The importance of the relationship between the private sector and the community, together with the role that the private sector can play in the prevention of drug abuse, is being increasingly recognized. The link between the private sector and the community has been facilitated by the United Nations International Drug Control Programme and the International Labour Organization in supporting two international conferences on this subject.* While the interdependence between community, community institutions and the private sector was recognized in many developed States in the nineteenth and early twentieth centuries, problems related to illicit drug use have highlighted this interdependence in recent years.

81. The importance of the community in drug abuse prevention is emphasized in the note by the Secretariat on basic principles of demand reduction (E/CN.7/1995/4). There are numerous examples of effective community responses to the drug abuse problem and various texts on how this has been achieved.[66] Ultimately, the drug abusers are someone's children, someone's neighbours, someone's friends, and they live in a community. The individual, his or her immediate social circle and the community all feel the impact of illicit drug abuse. The importance of community responses through partnerships with a range of agencies and organizations has been emphasized. The community on its own has a limited role, mainly because of

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*See the report of the Secretariat on regional cooperation in demand reduction (E/CN.7/1996/7).

a lack of resources or power, but it should be regarded as a vital and essential partner if the problems of drug abuse are to be dealt with.

82. Much work in the community is achieved by non-governmental organizations.[67] These are the organizations usually most in touch with what is happening in the community by virtue of actually working there. The broad policy framework may be articulated at the national level but needs to be adapted to local conditions, with local implementation.[68] This may be done by many different organizations, including State-controlled ones, but the bedrock of success is working together in implementing the policy.

83. Parents are extremely important participants in the prevention of drug abuse, especially primary prevention. They can be reached through the schools, through community activities and through workplace programmes. There is evidence to suggest that programmes for parents should be an integral part of the education process and not separate extracurricular efforts.[69]

B. Settings

84. The role of the media in the prevention of drug abuse is twofold. The first role is that of direct use of campaigns, typically by government, to increase public awareness of a problem. The media may also cover events that publicize the problem, such as the presentation of findings of an assessment of the drug abuse situation. Both can serve as means of presenting the extent and nature of the problem to the public, which in turn might lead to a sympathetic or accepting attitude towards the spending of funds for the prevention of primary abuse and the provision of services to those with a drug abuse problem. The media can also be a source of information about drug abuse. This role, may, however, be undermined if inaccurate information is given out. It has been suggested that, in different spheres of public life, the media sometimes assists in generating exaggerated caricatures of behaviour perceived to be deviant.

85. The role of schools in providing drug education programmes, as part of a broader, healthy lifestyle programme, as well as alternative activities for pupils, has already been examined. School facilities, however, may often be utilized outside the core school time by other members of the community. Building bridges between the school and the community often helps to reinforce the activities of both.

86. In many countries youth organizations are active in the area of drug prevention and often provide valuable contributions towards alternative activities for young people. Religious organizations may also play a role in prevention, and many are particularly involved in the area of treatment.

87. The opportunity to use the workplace as a setting for drug abuse prevention programmes has only relatively recently been widely acknowledged, particularly since the private sector has become more actively involved in both workplace programmes and joint activities with their local communities. The advantage of using the workplace as a setting is not only to deal with the potential and actual drug abuse problems of the workforce, but also to use the workplace as a channel to reach the workers' families. Many companies now operate employee assistance programmes, which focus not only on the worker but also on his or her family. Many workers may not have drug abuse problems themselves, but have such problems in their families. Because such problems often affect worker productivity and it is to the advantage of the employer to deal with them. The programmes also reach out into the community and seek to mobilize, support and reinforce community action, following the principle of the integration of programmes, thereby making each other more effective.

88. New approaches are being developed such as the outreach-assisted peer-support models of group interaction, an innovative strategy to help addicts on the street, control, reduce or stop their abuse of drugs.[70] This is a development of the community outreach models which have been used for some time to try to reach drug abusers who are not in treatment.

89. In many jurisdictions courts have the option to pass non-custodial sentences on drug abusers. This was discussed by the Commission on Narcotic Drugs at its thirty-eighth session in connection with the report of the Secretariat on alternatives to conviction or punishment (E/CN.7/1995/6). Evidence suggests that this is an effective way to reduce drug abuse if it is combined with supervised aftercare and objective monitoring.[71] Civil commitment was found "useful for bringing addicts into treatment, but it is not treatment and cannot take the place of treatment".[72]

90. Custodial institutions house an increasingly large number of persons convicted for drug-related offences, many of whom use drugs illicitly, and some of whom are drug-dependent. This poses particular problems, not only for the institutions in terms of prison discipline, but also for other inmates who may be introduced to drugs for the first time while in prison. This is true for many regions in the world: in particular, it was noted by States in the Americas in the annual report questionnaire, where one State reported that up to 80 per cent, with a minimum of 30 per cent, of inmates were estimated to continue to take drugs illicitly (E/CN.7/1996/5, paras. 46 and 47). For many institutions there is an opportunity to educate inmates, to counsel infrequent drug abusers and to treat drug-dependent persons. The opportunity to intervene in primary and secondary prevention is not undertaken in most custodial institutions because of the scarcity of resources. It is arguable that this constitutes a lost opportunity. Within a closed community such as a custodial institution, policies designed to educate, counsel and provide treatment could, if properly targeted, achieve a lasting impact. Without such policies, it is likely that an increasing number of those being released from prison will have drug problems, including those whose introduction to drug abuse will have taken place in prison. These and issues relating to the interaction between the volume of drug-related offenders, scarce criminal justice resources, and sentencing and penal policy are constantly under review by many Governments. It is hoped that a coherent strategy to deal with these problems will be forthcoming.

V. CONCLUSION

91. Considerable theoretical and empirical knowledge has developed in relation to primary and secondary approaches over many years. Fundamental to the development of this knowledge base has been the significant advances made towards an understanding of the methodological issues relating to the measurement of the effectiveness and impact of prevention measures, both those measures implemented individually and those implemented in combination with others. In addition, the furthering of an understanding of risk factors related to illicit demand, notably the correlates of initiation, has played an important role in the development of this knowledge base, though correlates of the processes leading to continuance, the development of dependence, harmful abuse and cessation are less well developed.

92. Extensive research and evaluations of the range of primary and secondary prevention activities in different countries and aimed at different segments of the population have led to a surprisingly concordant range of findings and conclusions. The independence of programmes developed and conducted in different States lends a high degree of confidence to those findings and conclusions that can be drawn. However, this does not mean that approaches do not need to be individually tailored to local circumstances. The picture of results that emerges with respect to the impact and effectiveness of strategies and approaches is, as would be expected, a mixture of results, with some approaches proving more effective than others.

93. The process of synthesizing the available information relating to primary and secondary prevention demonstrated the benefit to be derived from integrating these approaches with those of tertiary prevention, since the three lie on a continuum both in principle and in practice. Many States have developed an integrated and balanced approach utilizing aspects of primary, secondary and tertiary prevention. In many areas of implementation, particularly in relation to gaining credibility among the target population and focusing resources upon those groups where they are most required, the connection and mutually reinforcing relationship between the approaches are apparent.

94. Primary prevention approaches include public awareness campaigns, perinatal and pre-school developmental interventions, in-school education, youth programmes and drug testing. Secondary prevention includes reducing illicit demand through different forms of treatment and rehabilitation. The theoretical and empirical evidence available suggests that the efficacy of primary prevention is being called into question, while there appears to be evidence that secondary prevention can reduce demand, and result in cessation, under some conditions. While they have a high relapse rate, many aspects of secondary prevention approaches have been shown different in studies to be cost-effective, and there is some evidence suggesting that some treatment approaches may be more cost effective than supply reduction approaches to reducing illicit demand. However, the relatively limited information regarding cross-strategy comparative examinations, while a potentially rewarding avenue of investigation, means that at present it cannot be stated as a firm conclusion regarding the state of knowledge.

95. The present report demonstrates that, though diverse in coverage and methodology of both implementation and evaluation, there have been many recent developments in the knowledge base regarding primary and secondary prevention approaches. The mixture of results, which show differences between the various approaches with regard to their impact and cost-effectiveness, is as would be expected given the range and diversity of approaches covered.

Notes

[1]*WHO Expert Committee on Drug Dependence: Twenty-eighth Report*, WHO Technical Report Series 836 (Geneva, 1993).

[2]C. Fazey, *The Aetiology of Psychoactive Substance Use* (Paris, United Nations Educational, Scientific and Cultural Organization, 1977); and Dan J. Lettieri, Mollie Sayers and Helen Wallenstein Pearson, *Theories of Drug Abuse: Selected Contemporary Perspectives*, NIDA Research Monograph, No. 30 (Washington, D.C., United States Government Printing Office, 1980).

[3]David F. Musto, *The American Disease: Origins of Narcotic Control* (New Haven, Connecticut, Yale University Press, 1973).

[4]See I. C. Chopra and R. N. Chopra, "The use of cannabis in India", *Bulletin on Narcotics* (United Nations publication, vol. 9, No. 1 (1957), pp. 4-29; Peter T. Fuerst, ed., *Flesh of the Gods: The Ritual Use of Hallucinogens* (London, George Allen and Unwin, 1972); Barbara C. Myerhoff, *Peyote Hunt: The Sacred Journey of the Huichol Indians* (Ithaca, New York, Cornell University Press, 1974); Joseph Westermeyr, "Use of alcohol and opium by the Meo and Laos", *American Journal of Psychiatry*, vol. 127, No. 8 (1971), pp. 1019-1023; Michael Agar, *Ripping and Running: A Formal Ethnography of Urban Heroin Addicts* (New York, Seminar Press, 1973), and Edward Prebble and John J. Casey, "Taking care of the business: the heroin user's life on the street", *International Journal of Addictions*, vol. 4, 1969, pp. 1-24.

[5]B. H. Bry, P. McKeon and R. J. Pandina, "Extent of drug use as a function of risk factors", *Journal of Abnormal Psychology*, vol. 91, 1982, pp. 273-279.

[6]J. D. Hawkins, M. W. Arthur and R. F. Catalano, "Preventing substance abuse", *Crime and Justice: A Review of Research*, vol. 19, M. Tonry and D. Farrington, eds. (Chicago, University of Chicago Press, 1995), p. 370.

[7]Niall Coggans and Susan McKellar, "Drug use amongst peers: peer pressure or peer preference?", *Drugs: Education, Prevention and Policy*, vol. 1, No. 1 (1994), pp. 15-26.

[8]M. Plant and M. Plant, *Risk-Takers: Alcohol, Drugs, Sex and Youth* (London, Tavistock/Routledge, 1992).

[9]See Howard S. Becker, *Outsiders: Studies in the Sociology of Deviance* (New York, Free Press, 1963).

[10]See D. B. Cornish and R. V. Clarke, *The Reasoning Criminal* (New York, Springer-Verlag, 1986); and R. V. Clarke and M. Felson, *Routine Activity and Rational Choice: Advances in Criminological Theory* (New Brunswick, New Jersey, Transaction Books, 1993).

[11]See Carl G. Leukefeld and William Bukoski, eds., *Drug Abuse Prevention Intervention Research: Methodological Issues*, NIDA Research Monograph, No. 107 (Rockville, Maryland, National Institute on Drug Abuse, 1991).

[12]See Karl Popper, *The Logic of Scientific Discovery*, 2nd ed. (London, Hutchinson, 1968); Karl Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge*, 4th ed. (London, Routledge and Kegan Paul, 1972); and Karl Popper, *Objective Knowledge: An Evolutionary Approach* (Oxford, Oxford University Press, 1972).

[13]S. B. Sells, ed., *Evaluation of Treatment*, vols. 1 and 2 (Cambridge, Massachussetts, Ballinger, 1974); S. B. Sells and D. D. Simpson, *The Effectiveness of Drug Abuse Treatment*, vols. 3 and 4 (Cambridge, Massachusetts, 1976); and F. M. Tims and J. P. Ludford, eds., *Drug Abuse Treatment Evaluation: Strategies, Progress and Prospects*, NIDA Research Monograph, No. 51 (Rockville, Maryland, National Institute on Drug Abuse, 1984).

[14]S. M. Hall, "Clinical trials in drug treatment: methodology", *Drug Abuse Treatment Evaluation: Strategies, Progress and Prospects*, F. M. Tims and J. P. Ludford, eds., NIDA Research Monograph, No. 51, Rockville, Maryland, National Institute on Drug Abuse, 1984).

[15]M. S. Goldstein, M. Surber and D. M. Wilner, "Outcome evaluations in substance abuse: a comparison of alcoholism, drug abuse and other mental health interventions", *International Journal of the Addictions*, vol. 19, No. 5 (1984), p. 498.

[16]Robert L. Hubbard and others, "Treatment outcome prospective study (TOPS): client characteristics and behaviours before, during and after treatment", *Drug Abuse Treatment Evaluation ...*, pp. 42-68.

[17]R. H. Moos, J. W. Finney and R. C. Cronkite, "The need for a paradigm shift in evaluation of treatment outcome: extrapolations from the Rand report", *British Journal of Addiction*, vol. 75, No. 4 (December 1980), pp. 347-350.

[18]Y. Hser, M. D. Anglin and C. Chou, "Evaluation of drug abuse treatment: a repeated measure design assessing methadone maintenance", *Evaluation Review*, vol. 12, No. 5 (1988), pp. 547-570.

[19]Jerome H. Jaffe, "Evaluating drug abuse treatment: a comment on the state of the art", *Drug Abuse Treatment Evaluation ...*, pp. 13-25; and Frank M. Tims and Sherry Holland, "A treatment evaluation agenda: discussion and recommendations", *Drug Abuse Treatment Evaluation ...*, pp. 167-174.

[20]Fiona McDermott, Margaret Hamilton and Bruce Lagay, *Evaluating Treatments for Alcohol and Other Drugs* (Canberra, Australian Government Publishing Service, 1991).

[21]John C. Ball and Eric Corty, "Basic issues pertaining to the effectiveness of methadone maintenance treatment", *Compulsory Treatment of Drug Abuse: Research and Clinical Practice,* NIDA Research Monograph, No. 86, Carl G. Leukefeld and Frank M. Tims, eds. (Rockville, Maryland, National Institute on Drug Abuse, 1988), p. 187.

[22]N. G. Hoffman, P. A. Harrison and C. A. Belille, "Multidimensional impact of the treatment for substance abuse". *Advances in Alcohol and Substance Abuse*, vol. 3, No. 3 (1984); and D. K. Reilly, J. Hegg and D. Twyman, "A systems approach to the management of drug-related problems", *Australian Alcohol/Drug Review,* vol. 3, No. 2 (1984).

[23]Carl Akins and George Beschner, eds., *Ethnography: A Research Tool for Policymakers in the Drug and Alcohol Fields* (Rockville, Maryland, National Institute on Drug Abuse, 1980); and Howard Parker, Fiona Measham and Judith Aldridge, *Drugs Futures: Changing Patterns of Drug Use amongst English Youth* (London, Institute for the Study of Drug Dependence, 1995).

[24]W. Wayne Wiebel, "Identifying and gaining access to hidden populations", *The Collection and Interpretation of Data from Hidden Populations*, NIDA Research Monograph, No. 98, Elizabeth Y. Lambert, ed. (Rockville, Maryland, National Institute on Drug Abuse, 1990), p. 4.

[25]J. D. Hawkins, M. W. Arthur and R. F. Catalano, "Preventing substance abuse", *Crime and Justice: A Review of Research,* vol. 19, M. Tonry and D. Farrington, eds. (Chicago, University of Chicago Press, 1995), pp. 388-390.

[26]N. Dorn and K. Murji, *Drug Prevention: A Review of the English Language Literature,* ISDD Monograph, No. 5 (London, Institute for the Study of Drug Dependence, 1992), p. 9.

[27]See D. Hawkins, M. W. Arthur and R. F. Catalano, "Preventing substance abuse", *Crime and Justice: A Review of Research*, vol. 19, M. Tonry and D. Farrington, eds. (Chicago, University of Chicago Press, 1995), table 1, pp. 371-379.

[28]See F. E. Zimring and G. Hawkins, *The Search for Rational Drug Control Policy* (Cambridge, Cambridge University Press, 1992), appendix, "Estimates of illicit drug use: a survey of methods".

[29]See H. Yoshikawa, "Prevention as cumulative protection: effects of early family support and education on chronic delinquency and its risks", *Psychological Bulletin*, No. 115, 1994, pp. 28-54; J. D. Hawkins, R. F. Catalano and J. Y. Miller, "Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention", *Psychological Bulletin*, No. 112, 1992, pp. 64-105; and K. Nyberg and others, "Socio-economic versus obstetric risk factors for drug addication in offspring", *British Journal of Addiction*, No. 87, 1992, pp. 1669-1676.

[30]L. J. Schweinhart, "Can pre-school programs help prevent delinquency?", *From Children to Citizens: Families, Schools, and Delinquency Prevention*, J. Q. Wilson and G. C. Loury, eds. (New York, Springer-Verlag, 1987).

[31]N. Dorn and K. Murji, *Drug Prevention: A Review of the English Language Literature,* ISDD Monograph, No. 5 (London, Institute for the Study of Drug Dependence, 1992).

[32]G. J. Botvin, "Substance abuse prevention: theory, practice, and effectiveness", *Drugs and Crime*, M. Tonry and James Q. Wilson, eds. (Chicago, University of Chicago Press, 1990), p. 487.

[33]Jeffrey Wragg, *An Evaluation of a Model of Drug Education* (Canberra, Australian Government Publishing Service, 1992).

[34]D. M. Gorman, "On the difference between statistical and practical significance in school-based drug abuse prevention", *Drugs: Education, Prevention and Policy,* vol. 2, No. 3 (1955), p. 275.

[35]Nancy S. Tobler, "Meta-analysis of 143 adolescent drug prevention programs: quantitative outcome results of program participants compared to a control or comparison group", *Journal of Drug Issues*, vol. 4, 1986, pp. 537-567.

[36]H. Klee and P. Reid, *Amphetamine-Misusing Groups: a Feasibility Study of the Use of Peer Group Leaders for Drug Prevention Work among Their Associates*, United Kingdom Home Office Drugs Prevention Initiative, paper 3 (London, Home Office, 1995), p. i.

[37]See United States of America, Department of Justice, National Institute of Justice, *Arresting the Demand for Drugs: Police and School Partnerships to Prevent Drug Abuse* (Washington, D.C., United States Government, 1987).

[38]See W. DeJong, "A short-term evaluation of D.A.R.E.: preliminary indications of effectiveness", *Journal of Drug Education*, No. 17, 1987, pp. 279-294; C. L. Ringwalt, S. T. Ennett and K. D. Holt, 1991, "An outcome evaluation of project D.A.R.E.", *Health Education Research: Theory and Practice*, No. 6, pp. 327-337; and R. R. Clayton, A. Catarello and K. P. Walden, "Persuasive communication and drug abuse prevention: an evaluation of the D.A.R.E. program", *Persuasive Communication and Drug Abuse Prevention*, L. Donohew, H. Sypher and W. Bukoski, eds. (Hillsdale, New Jersey, Lawrence Erlbaum Associates, 1991).

[39]W. B. Hansen and others, "Affective and social influences approaches to the prevention of multiple substance abuse among seventh grade students: results from the Project SMART", *Preventive Medicine*, No. 17, 1988, pp. 135-154.

[40]P. L. Ellickson and R. M. Bell, "Drug prevention in junior high: a multi-site longitudinal test", *Science*, No. 247, 1990, pp. 1299-1305.

[41]D. Rosenbaum and others, "Cops in the classroom: a longitudinal evaluation of Drug Abuse Resistance Education (DARE)", *Journal of Research in Crime and Delinquency*, No. 31, vol. 1 (1994), p. 10.

[42]D. Rosenbaum and others, loc. cit., p. 3.

[43]N. Coggans and others, *National Evaluation of Drug Education in Scotland*, ISDD Research Monograph, No. 4 (London, Institute for the Study of Drug Dependence, 1991), p. 12.

[44]D. Rosenbaum and others, 1994, "Cops in the classroom: a longitudinal evaluation of Drug Abuse Resistance Education (DARE)", *Journal of Research in Crime and Delinquency,* No. 31, vol. 1 (1994), p. 26; see also S. T. Ennet and others, "Long-term evaluation of Drug Abuse Resistance Education (DARE)", *Addictive Behaviours*, vol. 19, No. 2 (1994), pp. 113-125.

[45]Beatriz Carlin Cotrim, "An overview on drug abuse prevention in Brazilian schools", *Drugs: Education, Prevention and Policy*, vol. 1, No. 3, p. 284.

[46]See L. Parker, *Music against Drugs: An Evaluation of a Drugs Prevention Diversionary Activity*, United Kingdom Home Office Drugs Prevention Initiative, paper 2 (London, Home Office, 1995).

[47]See M. Hanson, "Overview on drug and alcohol testing in the workplace", *Bulletin on Narcotics* (United Nations publication), vol. XLV, No. 2 (1993), pp. 3-44; and C. Raskin, "Drug and alcohol testing in the workplace: moral, ethical and legal issues", *Bulletin on Narcotics* (United Nations publication), vol. XLV, No. 2 (1993), pp. 45-81.

[48]R. E. Willette, "Drug testing programs", *Urine Testing for Drugs of Abuse*, NIDA Research Monograph, No. 73, R. L. Hawks and C. N. Chiang, eds. (Rockville, Maryland, National Institute on Drug Abuse, 1986).

[49]Eric D. Wish and Bernard A. Gropper, "Drug testing by the criminal justice system: methods, research and applications", *Drugs and Crime*, M. Tonry and James Q. Wilson, eds. (Chicago, University of Chicago Press, 1990), pp. 321-391.

[50]B. M. Kapur, "Drug-testing methods and clinical interpretations of test results", *Bulletin on Narcotics* (United Nations publication), vol. XLV, No. 2 (1993), pp. 115-154.

[51]John C. Ball and Alan Ross, *The Effectiveness of Methadone Maintenance Treatment: Patients, Programs, Services and Outcome* (New York, Springer-Verlag, 1991).

[52]W. M. Wechsberg and others, "A comparison of injecting drug users reached through outreach and methadone treatment", *Journal of Drug Issues*, vol. 4, No. 23 (1993), pp. 667-687.

[53]C. Peter Rydell and Susan S. Everingham, *Controlling Cocaine: Supply Versus Demand Programs* (Santa Monica, California, Rand Corporation, 1994), p. xiii.

[54]M. D. Anglin and Y. Hser, "Treatment of drug abuse", *Drugs and Crime*, vol. 13, *Crime and Justice: A Review of Research*, M. Tonry and J. Q. Wilson, eds. (Chicago, University of Chicago Press, 1991).

[55]M. D. Anglin and Y. Hser, "Treatment of drug abuse", *Drugs and Crime*, M. Tonry and J. Q. Wilson, eds. (Chicago, University of Chicago Press, 1990), p. 394.

[56]E. Tongue and D. Turner, "Treatment options in responding to drug misuse problems", *Bulletin on Narcotics* (United Nations publication), vol. XL, No. 1 (1988), pp. 3-19.

[57]M. O. Smith and O. Khan, "An acupuncture programme for the treatment of drug-addicted persons", *Bulletin on Narcotics* (United Nations publication), vol. XL, No. 1 (1988), pp. 35-41.

[58]G. Clements, L. Krenner and W. Mölk, "The use of the Transcendental Meditation programme in the prevention of drug abuse and in the treatment of drug-addicted persons", *Bulletin on Narcotics* (United Nations publication), vol. XL, No. 1 (1988), pp. 51-56.

[59]See K. Sharma and V. Shukla, "Rehabilitation of drug-addicted persons: the experience of the Nav-Chetna Center in India", *Bulletin on Narcotics* (United Nations publication), vol. XL, No. 1 (1988), pp. 43-49.

[60]V. P. Dole and M. E. Nyswander, "A medical treatment for diacetylmorphine (heroin) addiction: a clinical trial with methadone hydrochloride", *Journal of the American Medical Association*, No. 193, 1965, pp. 80-84.

[61]W. Ling, R. A. Rawson and M. A. Compton, "Substitution pharmacotherapies for opioid addiction: from methadone to LAAM and buprenorphine", *Journal of Psychoactive Drugs*, vol. 26, No. 2 (1994), pp. 119-128.

[62]W. J. Tilstone and A. H. Stead, "Pharmacokinetics, metabolism, and the interpretation of results", A. C. Moffat and others, eds., *Clarke's Isolation and Identification of Drugs in Pharmaceuticals, Body Fluids and Post Mortem Material* (London, Pharmaceutical Press, 1986), pp. 276-305.

[63]A. C. Moffat and others, eds., *Clarke's Isolation and Identification of Drugs in Pharmaceuticals, Body Fluids and Post Mortem Material* (London, Pharmaceutical Press, 1986).

[64]P. Popik, R. T. Layer and P. Skolnik, "Years of ibogaine: neurochemical and pharmacological actions of a putative anti-addictive drug", *Pharmacological Review*, No. 47, 1995, pp. 235-253.

[65]R. A. Rawson and W. Ling, "Opioid addiction treatment modalities and some guidelines to their optimal use", *Journal of Psychoactive Drugs*, vol. 23, No. 2 (1991), pp. 151-163.

[66]See Division for Community Prevention and Training, Office of Substance Abuse Prevention, *The Future by Design: A Community Framework for Preventing Alcohol and Other Drug Problems through a Systems Approach* (Washington, D.C., Office for Substance Abuse Prevention, 1991).

[67]See *Bulletin on Narcotics* (United Nations publication), special issue on involvement of intergovernmental and non-governmental organizations in matters of drug abuse control, vol. XLIII, No. 1 (1991).

[68]See S. Q. Quejas, "The role of non-governmental organizations in the prevention and reduction of drug abuse: the Philippine experience", *Bulletin on Narcotics* (United Nations publication), vol. XXXV, No. 3 (1983), pp. 53-62.

[69]Deborah A. Cohen and Kathryn P. Linton, "Parent participation in an adolescent drug abuse prevention program", *Journal of Drug Education*, vol. 25, No. 2 (1995), pp. 159-169.

[70]Judith A. Levy, Chuck P. Gallmeier and W. Wayne Wiebel, "The outreach assisted peer-support model for controlling drug dependency", *Journal of Drug Issues*, vol. 25, No. 3 (1995), pp. 507-529; and Nick Crofts and David Herkt, "A history of peer-based drug-user groups in Australia", *Journal of Drug Issues*, vol. 25, No. 3 (1995), pp. 599-616.

[71]M. D. Anglin, "The efficacy of civil commitment in treating narcotic addiction", *Compulsory Treatment of Drug Abuse: Research and Clinical Practice*, Carl G. Leukefeld and Frank M. Tims, eds. (Rockville, Maryland, National Institute on Drug Abuse, 1988), pp. 8-34.

[72]Carl G. Leukefeld and Frank M. Tims, "Compulsory treatment: a review of findings", *Compulsory Treatment of Drug Abuse* ..., p. 238.

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PRINCIPLES AND PRACTICE OF PRIMARY AND SECONDARY PREVENTION IN DEMAND REDUCTION PROGRAMMES

Regional cooperation in demand reduction

Report of the Secretariat

Summary

The need to establish a regional mechanism for the regular exchange of information, experiences, training programmes and new ideas on demand reduction was recognized by the Commission on Narcotic Drugs at its thirty-sixth session. In response, the United Nations International Drug Control Programme organized subregional expert forums on demand reduction and international private sector conferences on drugs in the workplace and the community. Participants examined the nature of drug abuse and its patterns and trends in their countries and described and compared the programmes that had been or could be undertaken to reduce the illicit demand for drugs. The forums also explored ways to facilitate the development of professional networks at the national and subregional levels. It was concluded that there was a need to develop regional and interregional networks and to formulate national demand reduction plans, taking into account the specific socio-cultural situations. All the forums concluded that there was a need to continue the momentum that had been generated by holding further meetings on a regular basis. The involvement of the private sector in the mobilization of human and financial resources to prevent drug abuse in the workplace and in the community was the subject of two meetings. It was emphasized that there was a need for closer interaction between the business sector and various other sectors of society to promote demand reduction activities. Although the discussions during the private sector conferences reflected a wide range of views representing many different cultural perspectives on the issue of drug abuse in the workplace, a healthy and safe workplace still remained the essential goal. It was concluded that regional cooperation was a fundamental requirement for confronting the problem of drug abuse and that the business sector needed to be in partnership with the community if it was to be successful.

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INTRODUCTION

1. The establishment of a regional and international system for the regular exchange of information, experiences, training programmes and new ideas on demand reduction programmes and policies was encouraged by the Economic and Social Council in its resolution 1993/35, adopted on the recommendation of the Commission on Narcotic Drugs at its thirty-sixth session. At the same session, during the discussion on the draft provisional agenda for its thirty-seventh session and future work, the Commission noted that the results of regional conferences on demand reduction could be examined.

2. The Commission on Narcotic Drugs at its thirty-eighth session, in considering the draft provisional agenda for its thirty-ninth session, decided that the item on demand reduction should specifically target primary and secondary prevention of illicit demand, as well as the regional expert forums on demand reduction.

3. In response to the wishes of the Commission, the United Nations International Drug Control Programme (UNDCP) has so far organized five subregional expert forums on demand reduction and two international private sector conferences on drugs in the workplace and the community, the results of which are described in the present report.

I. EXPERT FORUMS ON DEMAND REDUCTION

A. Objectives

4. The first subregional expert forum on demand reduction, for eastern and southern Africa, was held at Nairobi from 1 to 5 November 1993. The second forum, for Latin America, took place at São Paulo, Brazil, from 10 to 13 May 1994. That was followed by a forum for the Caribbean, which was held at Nassau from 4 to 7 October 1994. The fourth forum, for central and western Africa, was held at Yaoundé from 6 to 10 February 1995. The fifth forum, for south and south-west Asia, was held at New Delhi from 6 to 10 March 1995. Numerous Governments, United Nations entities and other organizations participated in the forums.

5. The aims of all the forums were broadly similar, but varied slightly from subregion to subregion according to the nature of the drug abuse problems experienced, the extent of existing demand reduction programmes and the resources available in the subregion.

6. The first aim of the forums was to examine the differences and similarities in the nature of drug abuse and its extent, patterns and trends in the participating countries, in order to provide background for discussion and to enable UNDCP to update its knowledge of the drug abuse situation in each subregion. The second aim was to identify the range and type of existing demand reduction programmes in each country and the extent of human, financial and physical resources currently available to carry out those programmes. A third aim was to identify priority areas for drug demand reduction activities based on an assessment of the situation and the resources available. Those discussions gave UNDCP indications of the capacity to implement demand reduction programmes in individual countries and in the subregion as a whole.

7. The exchange of information and experiences related to demand reduction programmes was expected to result in a transfer of knowledge and ideas, so that participants could learn from each other's difficulties, failures and successes. In order to sustain the exchange of ideas the forums were also expected to facilitate the development of professional networks among the participants, at the country and subregional levels, by sharing information on the range of demand reduction activities, policies and means of implementation.

8. One forum, for a subregion that had already developed extensive demand reduction programmes, was able to incorporate the additional aim of developing a subregional strategic plan. How programmes could be designed and implemented, and by which institutions, including how difficulties could be overcome, was to be explored. One goal of the forum was drawing up action plans to produce more effective demand reduction programmes and strategies in each country, as well as at the subregional and regional levels.

B. Proceedings

9. Each of the forums examined not only demand reduction, but also recent developments in the field, together with the drug situation in the subregion in question.

10. Working groups were organized on the following issues: similarities and differences in drug abuse patterns and trends in countries and the reasons; the specific causes and consequences of drug abuse; existing demand reduction programmes; how far those programmes matched the drug abuse situation; and how needs were assessed and how that assessment could be improved. There were also working groups on issues of concern in each subregion, such as primary prevention and drug education in formal and non-formal settings; community activities; outreach work and street children; mass media and public awareness campaigns; primary prevention in the workplace and other workplace programmes; treatment; rehabilitation and social reintegration; implementation of national strategies; gender and drug abuse; and needs assessment for programme design, monitoring and evaluation.

11. The working groups also placed emphasis on coordination and cooperation at the national and subregional levels. They considered problems such as how to formulate, develop and implement national demand reduction strategies, how to mobilize resources needed for their implementation and how to link and coordinate the parties involved within countries and between countries.

12. A report was adopted by each forum. Each report provided an overview of the drug situation and of the demand reduction programmes in the region, as well as structures, resources and services that could be used or that needed to be developed for demand reduction activities. A clearer picture emerged of the nature of the problems facing many countries, as well as an overview of the subregional situation.

C. Outcome

13. In all the forums it was agreed that national demand reduction plans should be based upon a clear assessment and analysis of the drug abuse situation and the knowledge of the causes and consequences of drug abuse. It was agreed that given the complexity of demand reduction activities, every effort should be made to ensure that all relevant professions, disciplines and ministries were involved in this task. As a result of the discussions many participants became more aware of sources of information that were available within regions and subregions.

14. Before formulating national demand reduction plans, there was a need to establish systematic and standardized data collection systems in order to be more fully aware of the nature and extent of the drug abuse problems and to keep abreast of their changing patterns. The need for intersectoral coordination in the collection and exchange of data and in the development of programmes was emphasized. Where there were similar cultural, social and economic patterns, the exchange of information and experiences helped to reduce some of the difficulties inherent in the transference of demand reduction programmes from one culture to another.

15. In many forums, the view was expressed that demand reduction strategies needed to be coordinated and to form part of a wider strategy that would also incorporate law enforcement strategies, at the national and subregional levels. Such integration was important not only at the national level, but also at the local level. Coordination between the law enforcement and treatment services could facilitate the process whereby, for

example, drug abusers would enter a treatment programme as a result of legal or administrative pressure. In one forum a wide-ranging action plan for the subregion was elaborated; the action plan was intended to serve as a basis for the development of demand reduction programmes.

16. Attention was drawn to the consequences of rising drug abuse, which participants felt resulted in not only dependency and deterioration of health among individuals, but also contributed to family breakdown, increased homelessness among children, prostitution, high unemployment, low productivity, increased crime rates, increased road and job-related accident rates and socio-political instability.

17. In several forums it was agreed that treatment services were not only inadequate but also often inappropriate. The reasons cited were low priority given to drug abuse by Governments, scarcity of funds, lack of expertise and an imbalance between supply and demand reduction efforts. Therefore, more emphasis must be given to providing adequate treatment facilities. It was noted that treatment should be designed to be flexible and patient-oriented. The importance of providing easy and immediate access to services that matched patients' needs was stressed.

18. In two forums it was noted that human immunodeficiency virus (HIV) infection was spreading quickly among injecting drug users in developing countries. That development had emerged in parts of Asia and South America within a relatively short period of time. It was felt that it was imperative for a quick response to be made to the rapidly deteriorating situation. In many of the forums the view was expressed that other regions needed to increase the awareness of government leaders and of society at large with regard to the matter, so that they would be prepared to respond to changes in the patterns of drug abuse and to prevent HIV infection from reaching epidemic levels among drug abusers.

19. In several forums it was concluded that the gender dimension should be taken into consideration in all drug demand reduction activities, including activities related to policy formulation, treatment services management, preventive education and social reintegration of rehabilitated drug abusers. The view was expressed that society-assigned gender roles contributed to drug abuse behaviour and that, therefore, to effectively deal with the increasing drug abuse, intervention through the gender relationship was one of the keys to reducing the illicit demand for drugs.

20. It was also noted in the forums that drug prevention campaigns that were well-coordinated and carefully tailored for a specific population tended to produce slow but positive results. It was frequently noted that mass media campaigns with negative messages, emphasizing the adverse effects of drug abuse and inculcating fear, were not effective, particularly if the messages were not entirely accurate. Therefore mass media campaigns should be positive in focus. Such campaigns should be pursued above all in regions where there was little awareness of the nature of drug abuse or where the availability of services was not widely known.

21. In many forums it was concluded that the involvement of the private sector in mobilizing human and financial resources to prevent drug abuse in the workplace should be actively pursued. Projects should be designed by the municipality and the community and should incorporate a high degree of decentralization. Law enforcement agencies should be involved in the demand reduction strategies.

D. Future directions

22. The forums also looked at specific national programmes and activities and made recommendations for both specific programmes and future meetings. All the forums stressed the need to develop national plans for reducing the illicit demand for drugs, plans adapted to the specific socio-cultural situation within a country or parts of the country. The plans should integrate activities in all sectors of demand reduction, whether in the mass media, in-school and out-of-school education, outreach work, treatment and rehabilitation. Priority areas of action should be selected for immediate programme formulation and implementation within a set time-frame. National plans could form the basis for the establishment of subregional networks to facilitate

the utilization of existing data in devising systematic policies and the sharing of expertise within subregions. The view was expressed in many forums that gender and the transmission of HIV were issues that must be taken into account when formulating policy.

23. One conclusion reached in all the forums was that more training needed to be given to health professionals since they could play an important role in the early identification of drug abuse and in the provision of counselling. The development of a national demand reduction programme required the mobilization of human and material resources. Professionals needed to be trained not only in the medical and social aspects of demand reduction, but also in programme design, project implementation and administration. Relevant ministries, non-governmental organizations and other agencies dealing with demand reduction should also be mobilized. The training would reduce the costs associated with treatment. Specific policies, strategies and programmes were needed for special groups at risk, such as street children, women and young people. The feasibility and effectiveness of low-cost treatment programmes should be explored and greater use should be made of indigenous treatment approaches. It was felt that there was a need to pay more attention in the future to the rehabilitation of drug abusers in order to break the cycle of abuse, treatment and relapse.

24. In developing future demand reduction programmes, systematic programme monitoring and evaluation should continue to be built into all programme planning and should constitute an essential element of the national plans. Programme evaluation was regarded as an essential element to be incorporated into all future programmes, for it provided a basis for the targeting and development of future activities, as well as being a feedback mechanism. It could also be used as a tool to secure political support and resources.

25. In one forum it was suggested that an action plan should be established for each subregion. A strong feeling was expressed that participation in future forums should be restricted to persons who were working directly in the field of demand reduction and not in the field of supply reduction or the suppression of illicit traffic. There was also a keen desire to establish a regular dialogue with law enforcement specialists in each of the subregions. It was therefore suggested that future forums on demand reduction should be held at the same time and place as the regional meetings of heads of national drug law enforcement agencies (HONLEA) and that some joint meetings should be arranged to discuss issues of common concern and interest.

26. It was concluded that the forums on demand reduction had been extremely useful. All the forums expressed the desire for the meetings to be held on a regular basis, as was done with the regional HONLEA meetings, in order to enable the momentum generated at the forums on demand reduction to be carried forward. Whether the forums should alternate with the regional HONLEA meetings or should be held in parallel was also discussed, but the need for the forums to continue in some form was held to be paramount.

II. INTERNATIONAL PRIVATE SECTOR CONFERENCES ON DRUGS IN THE WORKPLACE AND THE COMMUNITY

A. Objectives

27. A series of regional and interregional conferences has been planned in order to mobilize the private sector to participate more actively in the prevention of drug abuse in the workplace and in the community. The first International Private Sector Conference on Drugs in the Workplace and the Community, which took place at Seville, Spain, from 13 to 15 October 1993 and which was organized jointly by the Plan Nacional sobre Drogas of Spain and UNDCP, dealt with problems common to companies in Europe and North America. The second International Private Sector Conference on Drugs in the Workplace and the Community, which was held at Pôrto Alegre, Brazil, from 24 to 26 April 1995, was organized jointly by UNDCP, the International Labour Organization and the Social Service for Industry (SESI) of the Federation of Industries of the State of Rio Grande do Sul, focused upon companies in Latin America and the Caribbean.

The first and second conferences were attended by representatives of Governments, United Nations entities and other organizations, in addition to universities and community organizations, corporations and trade unions. A third conference is planned for east Asia in 1997.

28. The first aim of the first and second conferences was to promote the idea that drug demand reduction and the prevention of drug abuse in the workplace should be an integral part of broader policies and programmes against drug abuse undertaken by the responsible authorities at the local, national and international levels. Thus, private sector activity in the field of reduction of illicit demand for drugs should be integrated into national strategies and should dovetail with UNDCP efforts to promote regional and subregional cooperation agreements. The second aim was to promote close interaction in the area of drug abuse prevention between representatives of the business sector and other important sectors of society, such as the trade unions, non-governmental organizations and health professions, as well as the specialized agencies and other entities of the United Nations system. The conferences were also aimed at promoting the sharing of concrete drug abuse prevention experiences of private sector organizations, trade unions, non-governmental organizations and other parts of the community, as well as the results of some joint programmes involving all or some of those partners. Thus, the conferences were to serve as a stimulus for closer cooperation between the private sector and the community.

B. Proceedings

29. The two conferences covered largely the same issues. The first, however, concentrated more on the nature of the drug problem and the second focused on the responses to it. Papers were presented by experts on various aspects of the problem. Working groups considered relevant issues and then reported back to the plenary.

30. Presentations were made analysing trends in, and corporate world responses to, the drug abuse problem in the workplace. The presentations were followed by an examination of a number of ongoing programmes involving collaboration between businesses and communities. The corporate perspective emphasized preventive activities. It placed particular emphasis on physical, psychological and social health, targeting the workers and their families and organizing self-help groups, which promoted the changing of attitudes in order to discontinue use of dependence-producing substances. The trade union perspective emphasized the need to develop further government policies in the area of substance abuse.

31. There was also an analysis of the economic and social costs of drug abuse, the impact of substance abuse on the corporate world, and prevention strategies in the workplace and the community. The family was seen as the key social institution linking both the workplace and the community. The role of the family in the prevention of drug abuse was emphasized, in particular the capacity of the family to promote healthy lifestyles and behaviour by providing relevant information supporting preventive education.

32. At the first International Private Sector Conference, guidelines were set to assist in the design and implementation of programmes to deal with substance abuse in diverse workplace and community settings. Similar model programmes for drug abuse prevention were suggested at the second International Private Sector Conference. The programmes employed a holistic approach to dealing with problems involving employee health and well-being, in the context of which misuse of alcohol and drugs could also be dealt with.

C. Outcome

33. There was agreement that absenteeism, accidents, conflicts and drug dealing were all possible indicators of drug-related problems in the workplace. The issue of drugs in the workplace was seen as a complex one that should be examined from many perspectives. The fundamental requirement of any workplace policy in relation to drug abuse was that it should be backed by management. A major focus of the discussions was the issue of building business and community partnerships for the prevention of substance abuse.

34. At both conferences it was stated that the primary concern of many companies was alcohol-related problems in the workplace and that drug-related problems was a secondary issue. Many companies, however, were increasingly becoming concerned about problems related to the abuse of drugs and anticipated an increase in such problems.

35. There were lively exchanges of ideas and descriptions of different practices that broadened the understanding of the range of approaches used and the various problems existing in different industries and countries. It was noted that there were social and cultural differences in approaches to dealing with alcohol-related problems. Practices varied in organizations, even within countries, often depending on the size of the organization and the area of work. Such problems had traditionally required special attention in high-risk industries and safety-sensitive positions, such as the energy, transport and chemical industries. In less sensitive industries the range of corporate policies varied from zero tolerance of drugs to a more problem-oriented perspective, which was concerned with prevention, treatment and rehabilitation.

36. The issue of drug testing in the workplace was widely discussed but no agreement was reached on it. Nevertheless the participants valued the opportunity to exchange ideas and to explore in greater depth the problems that the issue of drug testing raised. Participants from some organizations specifically rejected drug testing, saying that a tripartite policy between the state, the employer and the employee, based only on counselling, treatment and rehabilitation, was their preferred option; others, however, felt strongly that it should be compulsory.

37. It was emphasized that, usually, policies could not be exported from one country to be adopted in another. It was noted, however, that some multinational companies were able to do just that, particularly in the oil and shipping industries, where a drug-testing programme might be required to be in place prior to the signing of a contract. It was felt that there was a need for each company to identify the nature of its own problems before a solution could be reached.

38. There was general consensus that there was a need for objective and reliable studies on drug abuse in the workplace. Data on alcohol abuse were usually easier to obtain than data on other drug abuse patterns. Nevertheless, from some general epidemiological studies it was possible to obtain information on the occupational status of drug and alcohol abusers.

39. The experience of the workforce and their representatives in dealing with problems of substance abuse was vital to the development of substance abuse programmes in the workplace and the community.

D. Future directions

40. Participants at both conferences agreed that successful substance abuse policies and programmes should be conceived and implemented in an equitable manner for management and labour. Their positive social impact had also demonstrated that they had economic benefits for the employer. Safety-sensitive work areas were seen as possibly presenting conditions requiring additional procedural elements such as testing and screening.

41. In future, drug testing should be seen as a diagnostic tool and deterrent that might be used effectively as part of a comprehensive demand reduction programme. A continuum of diagnostic tools, including peer review, counsellor assessment and drug testing, should be applied within each country taking into account national practices.

42. All participants agreed on two principles to be applied to all employees of participating enterprises and not just to specific groups of workers. The first was that the nature and structure of work sectors should be taken into consideration in forming plans for the implementation of general policy. The second was that all

psychoactive substances (illicit drugs, prescribed and non-prescribed medications and alcohol) should be included within general policy to prevent drug abuse problems in the workplace.

43. It was noted that, as a general rule, international, national and regional organizations advocating the adoption of workplace programmes should incorporate such policies into the management of their own human resources. Finally, it was considered important that general models for the promotion of workplace programmes to prevent drug and alcohol problems should be sufficiently flexible or adaptable to the great variety of cultural and organizational structures to which they applied.

44. On the basis of the work of the conferences, UNDCP intends to compile a compendium of existing workplace programmes and schemes for collaboration between businesses and communities, ensuring its wide dissemination for potential adaptation and implementation by enterprises and communities around the world.

III. CONCLUSION

45. The forums on demand reduction provided an overview of the drug situation in the several subregions, of existing demand reduction programmes and of resources that would be needed to carry out those programmes. Emphasis was placed on the lack of reliable data on the nature and extent of drug abuse and the lack of comprehensive data on the various programmes that had been established to deal with drug abuse. The exchange of information and the sharing of experiences between countries were fundamental to the establishment of coordinated subregional collaboration.

46. The importance of monitoring and evaluation was underlined. There were strong views expressed on the need to improve training for all categories of staff. It was felt that more attention should be given to rehabilitation and that treatment services must be designed for, and made more accessible to, persons in need of such services. The increasing social problems in all regions made the targeting of special groups at risk, such as street children, women, HIV-infected persons and youth in general, one of the most important issues of any demand reduction programme.

47. The success of the forums was demonstrated by the enthusiasm they had generated and by the strong desire on the part of the participants to see them continue. It was recognized that the exchange of information, ideas and experiences was particularly important to the development of demand reduction programmes. The wish was often expressed for the forums to be given equal importance with the regional HONLEA meetings, thus reflecting a balanced approach to both demand and supply reduction.

48. The international private sector conferences, which explored the issues of health and safety in the workplace, concluded that substance abuse programmes should be flexible and sensitive to cultural diversity and to different organizational structures. Both conferences agreed that successful substance abuse programmes had a positive impact on health and safety in the workplace and the community. Making community involvement an integral component of substance abuse programmes in the workplace would maximize the effectiveness of such programmes.

49. Coordinated education, training and educational services should be the joint responsibility of employers and the community. Early implementation of prevention campaigns was a priority in dealing with substance abuse problems. It was felt that policy should promote health and safety in the workplace for the benefit of the workers, the employers and the community. The need to consider public health while maintaining the privacy and confidentiality of information regarding employees was underlined.

IV. GUIDANCE REQUESTED FROM THE COMMISSION ON NARCOTIC DRUGS

50. Following its discussion of agenda item 4, the Commission might wish to indicate to UNDCP how to proceed with the forums on demand reduction, which, in 1996, will complete the cycle of meeting in each subregion. Options include:

(a) To continue the forums on demand reduction as currently conceived (subregional meetings; status as expert group meetings; three-year cycle, holding two expert forums per year; annual cost of approximately 700,000 United States dollars; and cost covered under the Fund of the United Nations Drug Control Programme);

(b) To request inclusion of the forums on demand reduction under the regular budget of the United Nations:

(i) As expert group meetings at the subregional level;

(ii) As subsidiary bodies of the Commission on Narcotic Drugs at the regional level, based on the formula used for the regional HONLEA meetings;

(c) In case the forums on demand reduction are established as subsidiary bodies of the Commission on Narcotic Drugs:

(i) To hold annual forums on demand reduction parallel to the HONLEA meetings in each region;

(ii) To hold biennial meetings and alternate annually between HONLEA meetings and demand reduction forum meetings in each region.

51. The Commission might also wish to determine the basis upon which Governments should be invited to identify participants.

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PRINCIPLES AND PRACTICE OF PRIMARY AND SECONDARY PREVENTION IN DEMAND REDUCTION PROGRAMMES

Strategy for demand reduction of the United Nations International Drug Control Programme

Report of the Executive Director

Summary

In its resolution 1995/16 of 24 July 1995, the Economic and Social Council requested the Executive Director of the United Nations International Drug Control Programme (UNDCP) clearly to define the UNDCP strategy for demand reduction. In response to that request, the Executive Director has identified the following three main objectives of the demand reduction strategy: to provide Governments with information on the nature, patterns and trends in drug abuse, for use in formulating drug-control policy; to identify effective methodologies and programmes for demand reduction in different socio-economic and cultural contexts; and to increase the effectiveness of measures undertaken at the national level to prevent and reduce drug abuse. The implementation strategies are described for each objective.

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INTRODUCTION

1. The Commission on Narcotic Drugs, at its thirty-eighth session, recommended to the Economic and Social Council the adoption of a draft resolution entitled "Integration of demand reduction initiatives into a cohesive strategy to combat drug abuse", which became Council resolution 1995/16 of 24 July 1995.

2. The Council, in its resolution 1995/16, requested the Executive Director of the United Nations International Drug Control Programme (UNDCP) clearly to define the UNDCP global strategy for demand reduction, in consultation with Governments, appropriate United Nations agencies and non-governmental organizations, and to report on the subject to the Commission at its thirty-ninth session. A note verbale on the issue, dated 13 July 1995, was sent to Governments, United Nations bodies and intergovernmental and non-governmental organizations, which were invited to submit their comments and suggestions as a contribution to the development of the strategy. The present report, which contains an outline of the planned strategy and objectives of UNDCP in the field of demand reduction, was prepared in response to that request.

THE STRATEGY

3. In the face of a worsening drug-abuse situation (see E/CN.7/1996/5), the international community is attaching greater importance to tackling the problem of the illicit demand for drugs as an essential component of a comprehensive, well-balanced approach to drug control. Particular attention is being paid to measures that may be effective in preventing initial abuse and dependence. The core function of UNDCP in demand reduction is to develop strategies and to identify the means by which the illicit demand for drugs can be reduced. That function is performed in the context of the overall leadership role of UNDCP in the United Nations system on issues of drug abuse, and relies on a close and collaborative relationship with other relevant agencies. UNDCP has functions which are cross-sectoral and interdisciplinary, combining normative and operational dimensions, and plays a pivotal role in the articulation of policy in relation to the concept and practice of demand reduction.

4. In pursuing the three objectives of the demand reduction strategy outlined below, UNDCP will continue to act as a catalyst, stimulating other organizations to address the issue of the reduction of illicit demand for drugs as an integral part of its work. UNDCP will reinforce its unique position in relation to the collection of data and dissemination of knowledge concerning not only the extent, patterns and trends of drug abuse worldwide, but also concerning information on the programmes that prove to be effective. UNDCP will also continue to provide technical cooperation in the form of advice and financial support to assist Governments in implementing their demand reduction objectives. In carrying out its functions, UNDCP will be engaged in the exchange of knowledge and experience of a technical and scientific nature in the field of demand reduction, and will actively participate in international debates and forums on the subject.

A. First objective

5. The first objective of the programme is to provide Governments with information on, and analyses of, the nature, patterns and trends in drug abuse, for use in formulating drug-control policy at the international and national levels, and to ensure that the UNDCP programme of activities is based on timely and complete information and knowledge.

6. The collection of information is intended to permit a series of analyses, essential for any policy decisions, including the identification of what demand reduction programmes need to be established, where and for whom. UNDCP has a unique world position in the field of demand reduction in relation to the collection, interpretation and dissemination of data and knowledge. That position will be capitalized upon. The data which are directly collected provide an overview of the world situation with regard to drug abuse and also of what Governments are doing by way of demand reduction programmes. UNDCP will give advice

to Governments on the requirements and modalities of demand reduction programmes. That advice can be given only within the context of specific knowledge of the particular drug situation in the country concerned, and of the human, structural and financial resources available.

7. Through the International Drug Abuse Assessment System (IDAAS) and by linking up with existing networks of epidemiologists and other social scientists, information on the world situation with regard to drug abuse, as well as on government responses to it, can be collected. Emphasis will be placed both on the establishment of networks with other sources of information and on the management and further development of the UNDCP database and its system of data collection. UNDCP will develop and promote the harmonization of methodologies for data collection in order to improve the quality and comparability of data, as well as to promote and disseminate suitable methodologies. Those efforts should result in a strengthening of IDAAS and the establishment of an international network of professionals to share information with each other - and with UNDCP for the benefit of the international community - on patterns and trends in drug abuse.

8. UNDCP will promote the use of rapid assessment studies as a tool which provides an assessment of the drug-abuse problem of a given locality and of the resources locally available to deal with it. Rapid assessment studies provide the platform on which to design activities. It will also promote and support research on the causes of drug abuse and its impact on societies and economies, and share the results with the international community. UNDCP aims therefore at improving the comparability of national and international drug abuse data, increasing the usefulness to member States, and to UNDCP itself, of the UNDCP system of data collection for demand reduction, and enhancing the capacity of the systems of data collection and analysis of the member States themselves.

Implementation

9. In pursuing the first objective of the strategy, UNDCP will examine IDAAS in order to improve its functioning. It will also ensure that the necessary links are made between IDAAS and the existing UNDCP database for supply reduction. The improved system will produce output in the form of country drug profiles incorporating demand, supply and legislative aspects of drug abuse.

10. UNDCP will devise and implement a strategy for revising the Annual Reports Questionnaire (E/CN.7/1991/CRP.10) submitted by Governments to the Secretary-General in order to ensure that key drug-abuse data are covered, particular attention being given to age- and gender-specific data, as well as to reduce the burden placed on member States to provide the data. It will also design a training strategy addressing those responsible for data collection and management at the national level, and will develop or adapt guidelines for the use of secondary data in the assessment of drug abuse.

11. UNDCP will link up, by electronic means, with a small number of selected specialists and organizations to facilitate the exchange of information. The results will be reviewed, and consideration will be given to expansion of the system into a full-scale data exchange network.

B. Second objective

12. The second objective is to identify effective methodologies and programmes for demand reduction in different socio-economic and cultural contexts, and to make them known to member States, international organizations and experts.

13. The global perspective of UNDCP enables it to identify effective methodologies and programmes as examples of the application of basic principles of demand reduction, adapted to local conditions. Taking due account of the multitude of approaches followed in different countries and even within individual countries, UNDCP will identify, strengthen, monitor and evaluate a small number of programmes for demand reduction

to serve as demonstration or model programmes. They will be programmes from which others can learn, and which can even be used for training. The knowledge that arises from the design, implementation and evaluation of the programmes will be synthesized and made known to a wider audience.

Implementation

14. In the pursuit of the second objective, UNDCP will develop methods and tools for the identification and dissemination of effective policies, techniques, programme modalities and resource materials on the prevention of drug abuse, and for the treatment, rehabilitation and social reintegration of former drug abusers.

15. UNDCP will thereby acquire a greater knowledge of the effectiveness of different methodologies for, and approaches to, demand reduction, and disseminate that knowledge to Governments and international organizations. It will also establish international networks of specialized institutions for the exchange of technical information on demand reduction issues.

C. Third objective

16. The third objective is to increase the effectiveness of measures undertaken at the national level to prevent and reduce drug abuse.

17. Reducing the illicit demand for drugs must be dealt with primarily at the national and local levels. Nevertheless, international support can be instrumental in enhancing the effectiveness of national efforts. Support will be given to member States by such means as the provision of technical and legal advice, expert meetings and technical cooperation projects addressing national, subregional and regional concerns.

Implementation

18. Priority will be given to the provision of technical advice and assistance to interconnected prevention, treatment and rehabilitation programmes judged to be effective, particularly pilot and demonstration activities. In order to ensure sustainability, the programmes will be implemented in the context of wider health, education and other social development programmes. The projects will serve as practical examples of what can be done in specific situations, the principles of which can be transferred elsewhere.

19. Special attention will be devoted to the promotion and support of research on the applications of demand reduction techniques, and to the development and analysis of methodologies by which such knowledge can be transferred through technical cooperation projects that foster community participation, where feasible, and that rely to the greatest extent possible on partnerships with other institutions, including organizations in the United Nations system, such as the International Labour Organization, the United Nations Educational, Scientific and Cultural Organization and the World Health Organization. The mobilization of civil society in demand reduction activities will be encouraged.

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ILLICIT DRUG TRAFFIC AND SUPPLY, INCLUDING REPORTS FROM THE SUBSIDIARY BODIES

Illicit drug trafficking

Report of the Secretariat

Summary

Global trends and recent developments in illicit drug trafficking are presented in the report. Trafficking in both heroin and cocaine increased rapidly in the 1980s, appeared to stabilize in the early 1990s and to increase in 1993 and 1994. While trafficking in cannabis herb still dominates the global situation with regard to trafficking in cannabis, trafficking in cannabis resin has been increasing and indoor cannabis cultivation continues to increase in many developed countries. Trafficking in methaqualone and other depressants appears to be more common in Africa and Asia.

The proportion of trafficked cocaine that was intercepted increased rapidly in the 1980s and was greater than the proportion of trafficked opiates that were intercepted. It is possible that one third or more of the cocaine that is trafficked is intercepted. However, the dynamics of trafficking are such that such a high seizure rate does not cause a proportional reduction in consumption. Further investigation of issues relating to the interception of the international illicit traffic and the role that it plays in reducing consumption and other drug-related problems may assist the Commission on Narcotic Drugs in its efforts to monitor the implementation of those provisions of the international drug control treaties relating to illicit trafficking, particularly those of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.

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INTRODUCTION

1. The annual statistics that appear in the present document relate mainly to 1994, with information for 1995 given where available. Often information available on illicit drug trafficking is fragmentary. Analyses of illicit drug production or manufacture and trafficking, by necessity, rely only on estimates. Such estimates should not be treated as hard data and may be revised at a later date as new information becomes available.

2. Two other documents before the Commission on Narcotic Drugs at its thirty-ninth session contain information relating directly to illicit drug trafficking: amphetamine-type stimulants are reviewed in the report of the Secretariat on stimulants and the use of their precursors in the illicit manufacture of and trafficking in drugs (E/CN.7/1996/12); and the illicit cultivation of opium poppy, coca bush and cannabis plant is reviewed in the report of the Secretariat on crops from which drugs are extracted and appropriate strategies for their reduction (E/CN.7/1996/11).

3. The main quantifiable information relating to the illicit drug traffic consists of data related to drug production, seizures and consumption. Patterns and changes in seizure data can reflect different factors, including variation in the manner in which agencies report and record drug seizures; variation in law enforcement practices; and variation in exogenous factors. Where other factors hold constant, changes in seizure data can indicate changes in trafficking, and some inferences in the present report are based on that assumption.

I. OVERVIEW OF TRENDS

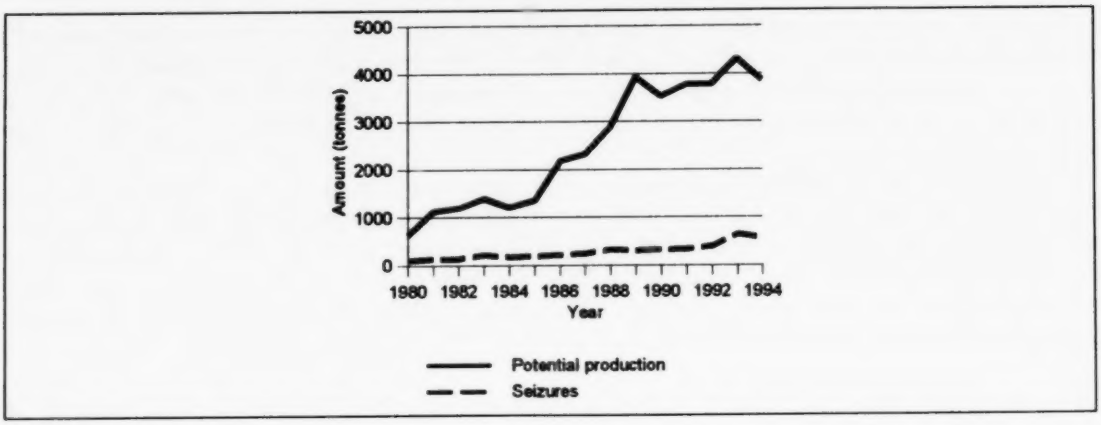
A. Opiates

4. Opium continues to be produced illicitly, mainly in three regions: south-east Asia, including the Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam; south-west Asia, particularly Afghanistan and Pakistan; and Latin America, particularly Colombia and Mexico. Estimates of potential global opium production and global reported seizures are shown in figure 1 for the period 1980 to 1994. (Seized heroin and morphine are shown in opium equivalent to facilitate comparison with opium production.) The Customs Co-operation Council (also called the World Customs Organization) reported that the first eight months of 1995 brought considerable increases in the amount of opiates seized compared with the corresponding period in 1994, heroin and opium seizures being 60 per cent and 41 per cent greater respectively.[1]

5. The main changes in heroin manufacturing since 1980 have been the vast overall increases at the global level, mainly reflecting increases in Afghanistan and Myanmar, and the rapid increase in opium production and heroin manufacture in Colombia in the 1990s. In the 1990s there have been reports of illicit opium production also occurring in central Asia. Within the global trend there have been some specific instances of reduction in production and trafficking caused by reduced poppy cultivation, such as in Lebanon. These changes have had subsequent effects upon the volume and distribution of interregional heroin trafficking. The International Criminal Police Organization (ICPO/Interpol) anticipates increased heroin manufacture in the second half of the 1990s, driven by increased demand.[2]

6. Heroin is manufactured primarily within the opium-producing regions. This reduces the risks and costs of trafficking, since heroin is of higher value per unit weight than opium. Within those regions, opium is trafficked to clandestine manufacturing sites located where risks of detection are perceived to be the least.

Figure 1. Opium: global illicit production and seizures, 1980-1994



Sources: Annual reports questionnaires received by the Secretary-General; Customs Co-operation Council (also called the World Customs Organization); International Criminal Police Organization; and government sources.

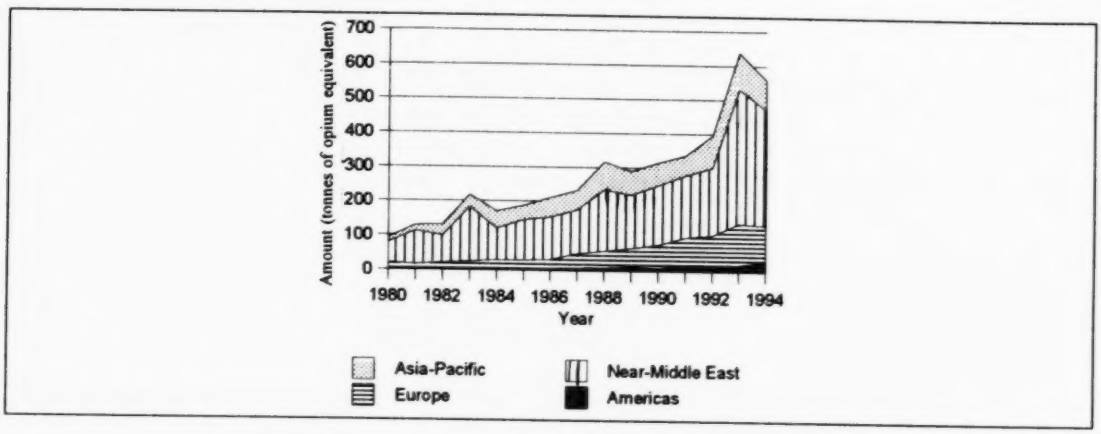
Note: Seized heroin and morphine are shown as opium equivalent.

7. International trafficking takes place between areas of production or manufacture and consumption, with south-west Asia supplying the bulk of the European market and south-east Asia and Latin America supplying the North American market. Seizure data suggest that between 80 and 90 per cent of heroin entering Europe between 1992 and 1994 came from south-west Asia and travelled through Turkey along the Balkan route[3] and that 57 per cent of heroin entering the United States of America in 1994 was from south-east Asia, 32 per cent was from South America, 6 per cent was from south-west Asia and 5 per cent was from Mexico.[4]

8. Changes in the regional distribution of seizures, shown in figure 2, give a composite indicator of changes in trafficking and law enforcement. While heroin is more commonly trafficked and seized internationally, heroin and morphine seizures are shown as opium equivalent in order to allow for aggregation. Only 92 tonnes of opium equivalent were seized in 1980, compared with nearly 642 tonnes in 1993. Opiate seizures appear high in 1993, owing to large amounts reported seized in the Islamic Republic of Iran and in Turkey. Of the 562 tonnes of opiates seized in 1994, 60 per cent was seized in the Near and Middle East, 19 per cent was seized in Europe, 16 per cent was seized in Asia and the Pacific and 5 per cent (or 28.1 tonnes) was seized in all of the Americas. From 1980 to 1994, only up to 5 tonnes in opium equivalent (less than one half of a tonne of heroin) were reported, for any given year, as seized in either Africa or the south Pacific, and in 1994 the two regions accounted for 1 per cent of the total amount seized.

9. Transit States are located (a) between producers or manufacturers and consumers or (b) as intermediaries on a more lengthy route perceived to be less risky. Turkey has long been cited as a major transit State on the Balkan route used by heroin traffickers. Countries in western Africa have been cited as transit States that have been used by criminal gangs from that subregion to transport illicit heroin consignments from Asia to the United States since the mid-1980s and, more recently, to transport illicit cocaine consignments from Latin America to Europe. As with much information relating to drug trafficking, it is difficult to quantify the significance of different aspects, owing to the nature of intelligence information and because seizure and arrest data reflect the emphasis of law enforcement efforts as well as drug trafficking. Given this limitation, some indications might be gleaned from data relating to arrests for drug trafficking where there are major illicit markets.

Figure 2. Opium:[a] seizures, by region, 1980-1994



Sources: Annual reports questionnaires received by the Secretary-General; Customs Co-operation Council (also called the World Customs Organization); and International Criminal Police Organization.

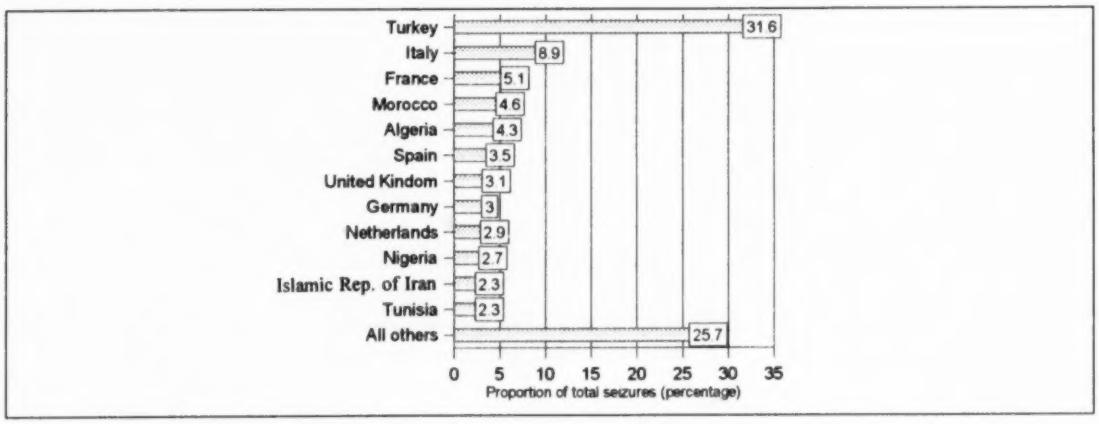
Note: Heroin and morphine are shown as opium equivalent.

[a]Excluding poppy plants and seeds.

10. Europe remained the principal point of destination for international heroin trafficking in 1994. Excluding seizures made during arrests for heroin possession, 40 per cent of heroin seizures involved the arrest of Europeans, 37 per cent involved the arrest of nationals of countries in the Near and Middle East, 22 per cent involved the arrest of Africans, 1 per cent involved the arrest of nationals of countries in the Americas and 1 per cent involved the arrest of nationals of countries in Asia and the Pacific. Distribution by country is highly skewed, Turkish nationals accounting for nearly 32 per cent of the arrested heroin traffickers (see figure 3). Some of those arrested were expatriate Turkish nationals, but intelligence reports of Istanbul being the major clearing-house for heroin destined for western Europe[5] conform with the pattern revealed by these data. Of the remaining non-European States, nationals of Morocco and Algeria were the next group most frequently arrested for trafficking. Nigerian nationals ranked tenth, accounting for less than 3 per cent of total heroin traffickers, followed by nationals of the Islamic Republic of Iran and Tunisia. With respect to European countries, heroin trafficking is dominated by nationals of France, Germany, Italy, Netherlands, Spain and United Kingdom of Great Britain and Northern Ireland. The representation of some countries in this picture may be artificially high in relation to actual trafficking, because of emphasis given by law enforcement, and the self-fulfilling nature of law enforcement profiling of traffickers (which varies in scientific validity with respect to actual trafficking).

11. Prices on illicit drug markets are an important indicator of the interaction between supply and demand. Figure 4 shows indexed trends in heroin retail prices (adjusted for inflation) and seizures in Europe from 1983 to 1994. European heroin seizures increased fivefold during that period, while global estimated opium production increased only around threefold. Heroin prices declined fairly steadily, however; in 1994 they were around 40 per cent of the 1983 price in real terms and purity levels were reported to be increasing. The suggestion is that illicit trafficking and supply increased quicker than illicit demand during that period. Wholesale prices followed trends similar to those of retail prices.

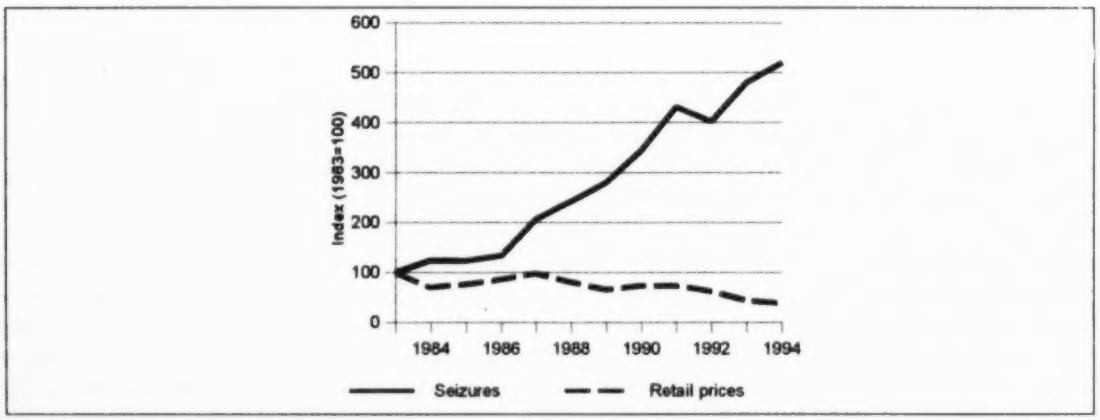
Figure 3. Heroin: traffickers arrested in Europe, by country of origin, 1994



Source: Significant seizures reported to the Secretary-General, the International Criminal Police Organization and the Customs Co-operation Council (also called the World Customs Organization).

Note: If more than one trafficker was arrested, the nationality of the majority of those arrested was used.

Figure 4. Heroin: seizures and retail prices in Europe, 1983-1994



Source: Annual reports questionnaires received by the Secretary-General.

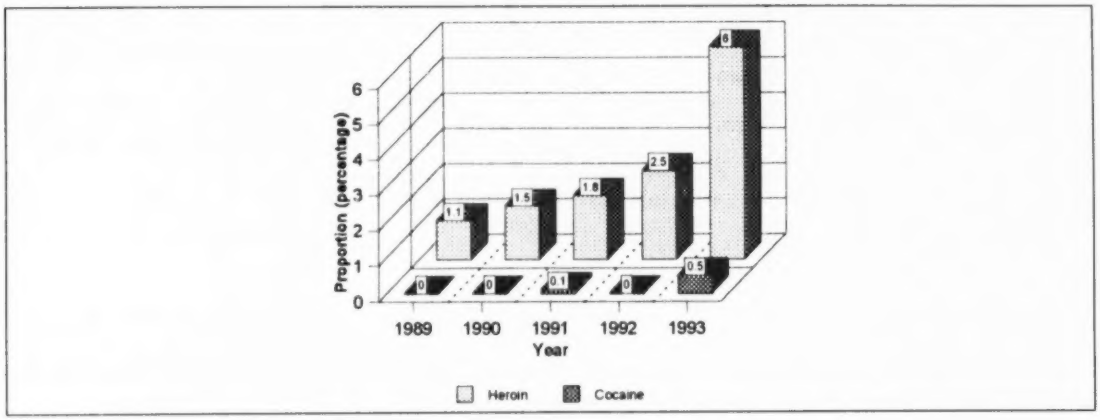
Note: Prices calculated as detailed in United Nations International Drug Control Programme, "Cocaine and heroin trafficking and prices in Europe, 1983-93", discussion paper, August 1994.

12. According to ICPO/Interpol, the area of the Persian Gulf was increasingly being used as a transit point for illicit heroin consignments *en route* to Africa and Europe in the first half of the 1990s. That was attributed to both the increased overall volume of air traffic in that area and the diversification of the trafficking routes used.

13. It appears that central Europe and eastern Europe are increasingly being used for stopovers by heroin couriers travelling by air from Asia. Those areas account for an increasing proportion of heroin and cocaine seizures made worldwide (as figure 5 shows for eastern Europe). Heroin seizures in central and eastern Europe have increased more markedly than cocaine seizures, as might be expected considering the

geographical proximity of those areas to major sources of heroin. The term "eastern European" as used here includes Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Hungary, Kazakstan, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovenia, the former Yugoslav Republic of Macedonia, Ukraine, Uzbekistan and Yugoslavia.

Figure 5. Heroin and cocaine: seizures in eastern Europe as a proportion of seizures worldwide, 1989-1993



Source: United Nations International Drug Control Programme, "The vulnerability of transition countries to drug trafficking, drug abuse and organised crime", discussion paper, October 1995.

14. The volume of vehicles and passengers moving to and from eastern Europe has increased greatly in recent years as a result of changing political and economic conditions. In 1993, the volume of traffic moving between Germany and its eastern neighbours, Austria, the Czech Republic and Poland, increased by 20 per cent, with the crossing of 1.6 million trucks, 33 million passenger cars, 240,000 buses and 140 million other means of transporting passengers.[6] Both the absolute volume and recent increases in trade and transportation make interdiction by random checks more difficult. Similarly, many recent trade agreements in different parts of the world, designed to increase trade and reduce border check requirements, and political developments such as those in eastern Europe, may have had an inadvertent effect of providing greater opportunities for illicit drug trafficking.

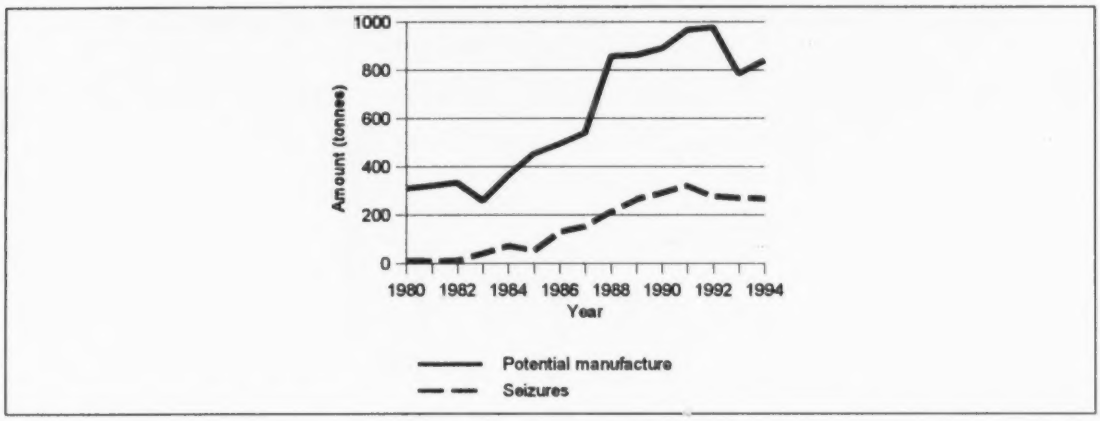
B. Cocaine

15. Estimated global cocaine manufacture and seizures are shown in figure 6 for the period from 1980 to 1994. (For potential cocaine manufacture, coca leaf production estimates were converted to cocaine equivalent to facilitate comparison with seizures.)

16. While some coca bush cultivation occurs in other Latin American countries, almost 50 per cent of all coca leaf production currently appears to be taking place in Peru, around 25 per cent in Bolivia and 25 per cent in Colombia. Many farmers manufacture coca paste in order to add value to the product before sale to intermediaries and traffickers who transport it, mainly to Colombia, for the manufacture of cocaine. However, the proportion of cocaine manufactured in Bolivia and particularly in Peru is increasing, owing (a) to the increased recognition of the greater profit to be made from cocaine manufacture and trafficking and (b) to the intensified government interception efforts at the borders between those countries. From its relatively concentrated manufacturing base, cocaine is transported to illicit markets in North America and, to a lesser extent, Europe by a variety of routes and methods, from different parts of Latin America.

Potential cocaine manufacture increased around fourfold between 1980 and 1992, but appeared to decline in 1993 and 1994.

Figure 6. Cocaine: global illicit manufacture and seizures, 1980-1994

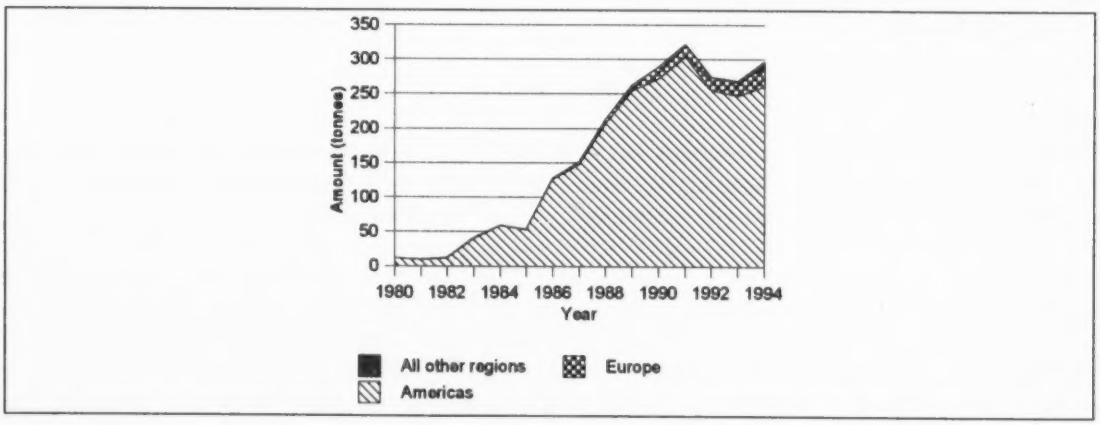


Sources: Annual reports questionnaires received by the Secretary-General; Customs Co-operation Council (also called the World Customs Organization); International Criminal Police Organization; and government sources.

Note: Seized coca leaf is shown as cocaine equivalent.

17. The regional picture of trafficking derived from seizure data, shown in figure 7, has been consistently highly skewed towards the Americas. In 1994, of the 290.3 tonnes of cocaine seized worldwide, 90 per cent was seized in the Americas and 10 per cent was seized in Europe. In Africa, Asia and the Pacific, and the Near and Middle East, 1 tonne of cocaine was seized in 1994, and over one half of that was seized in Australia.

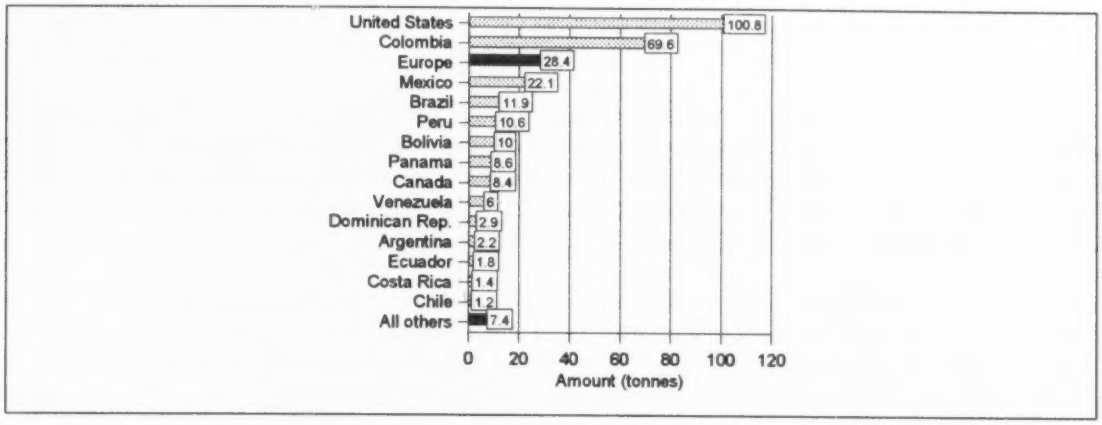
Figure 7. Cocaine: seizures, by region, 1980-1994



Sources: Annual reports questionnaires received by the Secretary-General; Customs Co-operation Council (also called the World Customs Organization); and International Criminal Police Organization.

18. Four countries accounted for around 80 per cent of the 290 tonnes of cocaine reported seized worldwide in 1994, as shown in figure 8. Colombia and the United States together accounted for 59 per cent of cocaine seized. Seizure figures reinforce intelligence reports that Brazil, Ecuador, Mexico, Panama and Venezuela are used as transit States for cocaine moving towards illicit markets in the United States and in countries in Europe; that the Dominican Republic is used for stopovers on the Caribbean transit route; and that Argentina is used as a transhipment point for cocaine *en route* to Europe. Consumption indicators also suggest that the United States remains the principal target for cocaine traffickers.

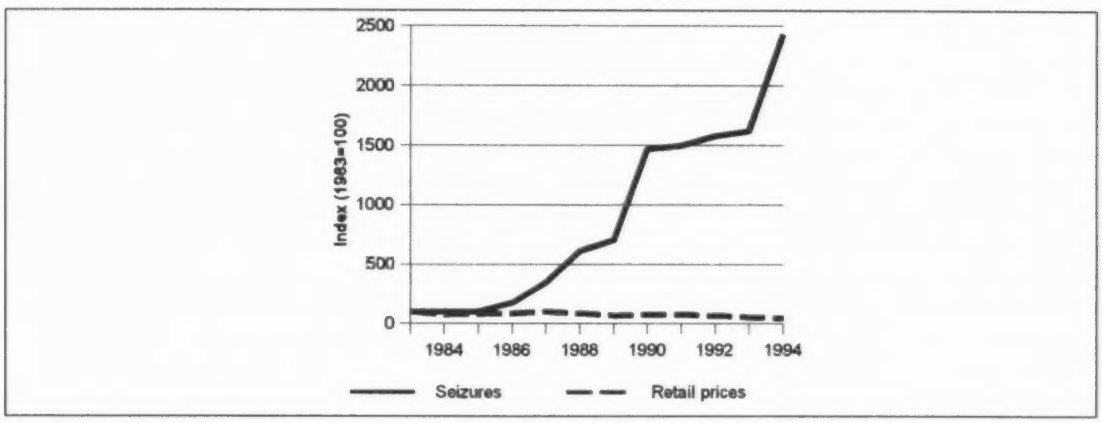
Figure 8. Cocaine: global seizures, 1994



Sources: Annual reports questionnaires received by the Secretary-General; Customs Co-operation Council (also called the World Customs Organization); and International Criminal Police Organization.

19. While the absolute amount of cocaine intercepted in Europe was far lower than that in the Americas, the amount reported to the Secretary-General increased quickly from 1985 onwards, stabilized somewhat between 1990 and 1993 and rose in 1994 to over 28 tonnes. Retail and wholesale prices of cocaine, in contrast, declined fairly steadily in a similar manner to those of heroin, as shown in figure 9. The European average real retail price of cocaine in 1994 was about 45 per cent of the 1983 price.

Figure 9. Cocaine: seizures and retail prices in Europe, 1983-1994



Source: Annual reports questionnaires received by the Secretary-General.

Note: Prices calculated as detailed in United Nations International Drug Control Programme, "Cocaine and heroin trafficking and prices in Europe, 1983-93", discussion paper, August 1994.

20. The recent arrests of most of the leaders of the Cali cartel, as a result of intensified efforts of the Government of Colombia, may prove to be a milestone in drug control efforts. While the impact of the arrests upon cocaine trafficking has not been evaluated at the time of preparation of the present report, the interruptions in cocaine manufacturing and trafficking are reported to have reduced coca leaf prices. The significant factors determining the impact of the arrests will be the extent and duration of the interruptions and whether, in the absence of a major cartel, cocaine trafficking will return to its previous levels.

21. According to the World Customs Organization, cocaine seizures in the first eight months of 1995 were 26 per cent lower than in the corresponding period in 1994.[7] It is possible that this could reflect a real reduction in cocaine manufacturing or trafficking or both.

C. Cannabis

22. Estimates of cannabis production and trafficking are less available than estimates of heroin and cocaine manufacture and trafficking. The reasons include the more dispersed nature of illicit cannabis cultivation; significant amounts of cannabis growing wild; extensive cannabis growth classifiable as stemming from previous licit hemp cultivation; the increasing prevalence of indoor cannabis cultivation; and the fact that there are fewer estimates of the major areas of outdoor cannabis growth.

23. According to estimates, in 1994 the major reported producer countries of cannabis grown outdoors were the countries in central Asia (cannabis plants covering an area totalling about 170,000 hectares); South Africa (82,734 hectares); and Morocco (over 50,000 hectares); Mexico (around 20,000 hectares). There are also significant areas of cannabis growth in Colombia, Jamaica and the United States. In addition, cannabis is grown to an unknown extent, and grows in the wild, in a large number of countries. The official United States government estimate of domestic cannabis production in 1993 was between 6,000 and 7,000 tonnes, which fell to around 3,500 tonnes in 1994. However, the fact that over 53,000 outdoor cannabis plots were eradicated in the United States in 1994, 72 per cent of which were classified as large and eradicated by chemical means, suggests that the hectarage of cultivation was large in the aggregate. There has been concern within the United States that if trends in cannabis cultivation continue, the United States could become a major exporter of cannabis.[8]

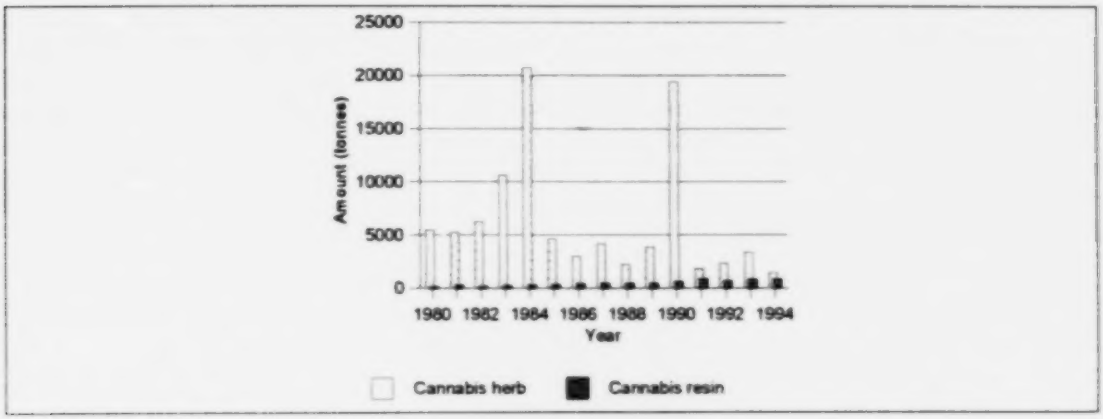
24. The cannabis growing in countries in central Asia reputedly has a low tetrahydrocannabinol (THC) content. Licit hemp production used to take place in those countries, and that is where much of the cannabis currently growing there has its origins. As a consequence, the contribution of those countries to the international illicit traffic in cannabis is small in spite of the fact that the total area covered by cannabis plants in central Asia is large.

25. The pattern of cannabis seizures since 1980, shown in figure 10, suggests that, at the global level, cannabis resin has increased in importance relative to cannabis herb. This is of note since cannabis resin is typically of higher THC content, per unit weight, than cannabis herb. Further investigation of the apparent decline in the amount of cannabis herb seized could prove informative and may reflect law enforcement practices. In 1994, less than 2 tonnes of liquid cannabis, 1,457.5 tonnes of cannabis herb and 868.3 tonnes of cannabis resin were reported seized. Cannabis resin and cannabis herb seizures made in 1994 are shown by region in figure 11. The proportions of cannabis resin and cannabis seized reflect trafficking from different sources to some extent, with Europe importing a higher proportion of cannabis resin originating in northern Africa.

26. Indoor cannabis cultivation is increasingly being reported in developed countries, principally for domestic consumption. Seizures of indoor cannabis operations in the United States tripled between 1988 and

1993.* Hydroponic techniques produce cannabis crops with high yield, and there have been reports of several strains of cannabis with a high THC content. More speculatively, if such trends in cannabis cultivation continue, it is possible that more competitively priced cannabis grown indoors in developed countries could reduce international trafficking in cannabis and could possibly even have an impact upon cannabis cultivation in the major cannabis-exporting countries. This may be an area worthy of further investigation.

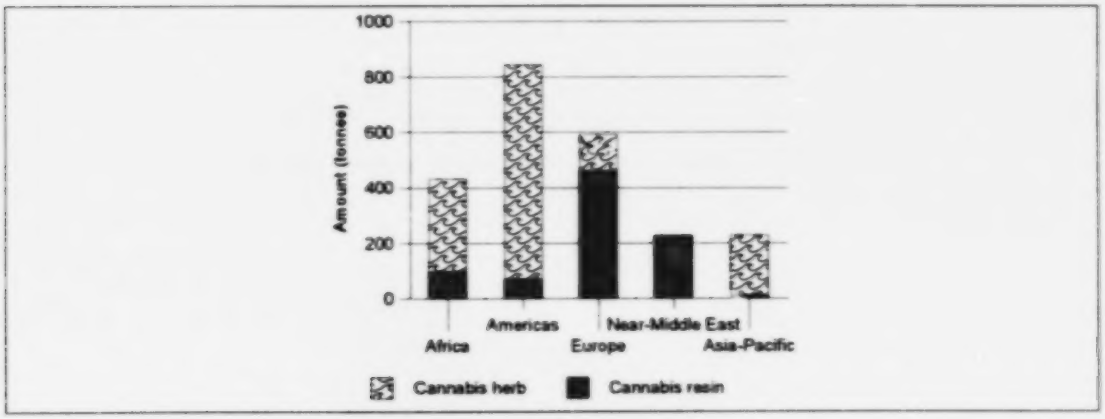
Figure 10. Cannabis resin and cannabis herb:[a] global seizures, 1980-1994



Source: Annual reports questionnaires received by the Secretary-General.

[a]Excluding plant, seeds and liquid.

Figure 11. Cannabis resin and cannabis herb:[a] seizures, by region, 1994



Source: Annual reports questionnaires received by the Secretary-General.

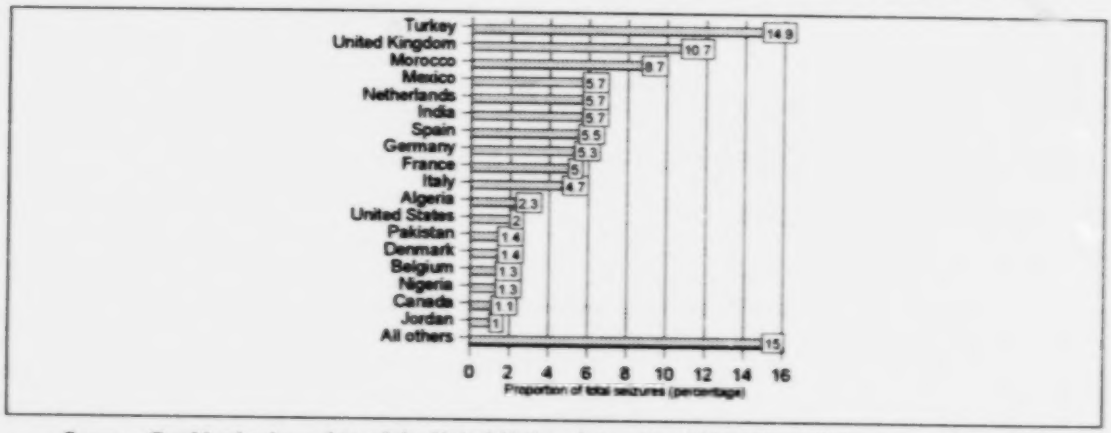
[a]Excluding plants, seeds and liquid.

*See the report of the Secretariat on crops from which drugs are extracted and appropriate strategies for their reduction (E/CN.7/1996/11).

27. According to a recent report of the South African Police Service,[9] South Africa may be the world's largest cannabis-producing country. A 1994 airborne survey estimated the total area under cannabis cultivation in that country to be over 82,000 hectares, mainly in the Eastern Cape. The estimated dry weight of the cannabis herb produced was over 180,000 tonnes. Around 30 per cent of the cannabis is reported to be consumed locally and the rest is reportedly transported by air and sea to European countries, in particular the Netherlands and the United Kingdom, and to the United States. Over 7,000 tonnes of cannabis plants were reported seized in South Africa in 1994. Cannabis cultivation in other parts of the African continent has not been subjected to similar surveys.

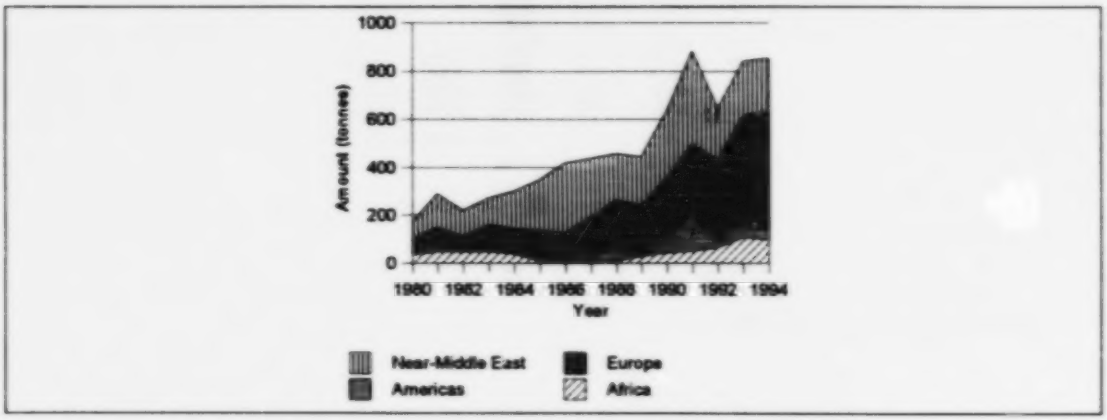
28. European traffickers accounted for around one half of the persons arrested worldwide in 1994 for trafficking in cannabis (see figure 12) and are reported to control much of the distribution of African cannabis resin in Europe. The proportion of cannabis resin seized worldwide that is accounted for by Europe has increased over the last decade, as shown in figure 13. According to ICPO/Interpol, Morocco was the source of one third of the 100 largest cannabis consignments seized worldwide in 1994, all of which were greater than 1 tonne, and Spanish authorities made the single largest cannabis seizure in that year - over 10 tonnes discovered on a fishing boat from Morocco. According to the World Customs Organization, cannabis seizures in the first eight months of 1995 appeared to be relatively similar, in terms of total weight, to those in the corresponding period in 1994.

Figure 12. Cannabis: traffickers arrested worldwide, by country of origin, 1994



Source: Combined seizure data of the United Nations International Drug Control Programme, the International Criminal Policy Organization and the Customs Co-operation Council (also called the World Customs Organization).

Figure 13. Cannabis resin: seizures, by region, 1980-1994



Source: Annual reports questionnaires received by the Secretary-General.

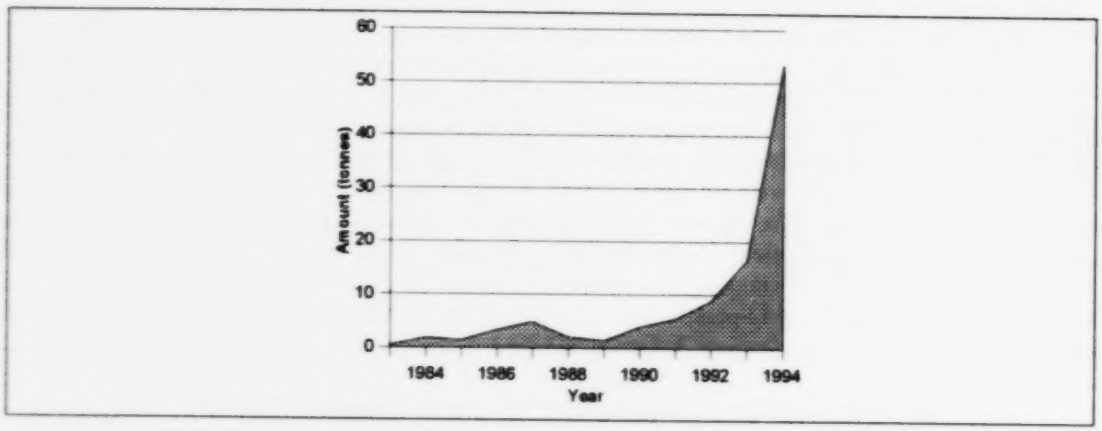
D. Psychotropic substances

29. There has been a strong increase in trafficking in stimulants in the 1990s. Past and present trends in the illicit traffic in amphetamine-type stimulants, including the methylenedioxymethamphetamine (MDMA) ("ecstasy") group, are discussed in the report of the Secretariat on stimulants and the use of their precursors in the illicit manufacture of and trafficking in drugs (E/CN.7/1996/12). Trends in trafficking in depressants and lysergic acid diethylamide (LSD) are briefly reviewed below.

Depressants

30. Global seizures of methaqualone and of other depressants in the period from 1983 to 1994 are shown in figures 14 and 15 respectively. Units and kilograms are reported separately for depressants other than methaqualone, since the form of preparation, the source of origin and the particular depressant to which they relate are not known. While there appears to have been, at the global level, an exponential increase in the weight of methaqualone reported seized in the 1990s and a surge in the amount of methaqualone and other depressants reported seized in 1994, this is concentrated among a small number of countries.

Figure 14. Methaqualone: global seizures, 1983-1994



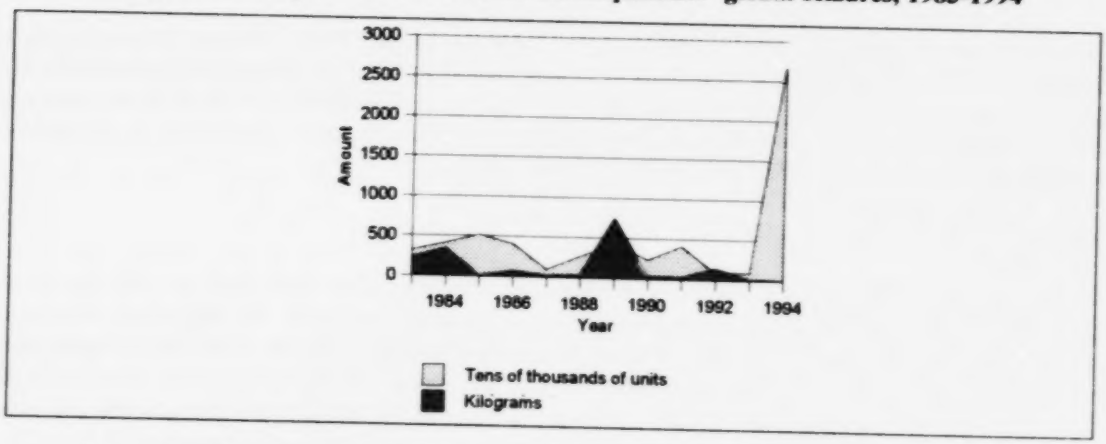
Source: Annual reports questionnaires received by the Secretary-General.

Note: Seizures reported in units have been converted to kilograms (and then to tonnes) using the following equation: 1 tablet or unit = 200 mg.

31. In 1994, India reported having seized 45 tonnes of methaqualone, 85 per cent of the total amount reported seized worldwide. The Phillippines reported having seized 7 tonnes of methaqualone in 1994, 13 per cent of the global total. While the remainder of the world accounted for only 2 per cent of the methaqualone seized worldwide, methaqualone trafficking by region may provide a better picture of the situation. Only 12 countries reported seizures of methaqualone to the Secretary-General for 1994, of which six were in Africa, two were in the Near and Middle East, one was in Europe and one was in North America.

32. For depressants other than methaqualone, in 1994 the United States reported the most units seized: over 25 million units, or 95 per cent of the total number of units seized worldwide. The United States was followed by Chad (slightly less than 500,000 units seized), Saudi Arabia (about 333,000 units seized), Japan (154,000 units seized), and the Bahamas (136,000 units seized). In 1994 seizures of such depressants were reported by more countries than seizures of methaqualone.

Figure 15. Depressants other than methaqualone: global seizures, 1983-1994

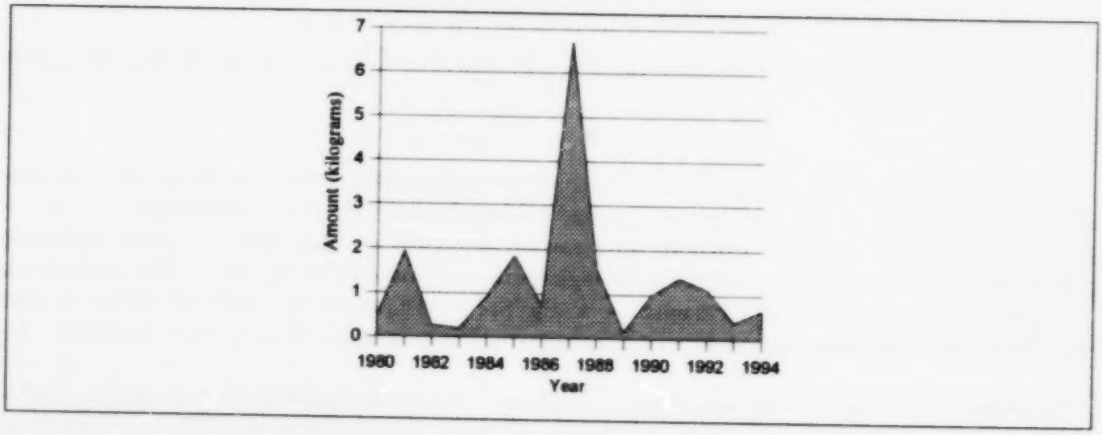


Source: Annual reports questionnaires received by the Secretary-General.

Lysergic acid diethylamide

33. Global seizures of LSD are shown in figure 16 for the period 1980 to 1994. It is difficult to draw conclusions regarding LSD trafficking from the seizure data, apart from the fact that there is no discernible trend. This is partly because the product is easy to disguise, and of extremely low bulk, making detection particularly difficult, while international trafficking in LSD is less prevalent than international trafficking in illicit drugs from natural products. In the case of LSD, reported seizures may be a more variable, and less reliable, indicator of trafficking than in the case of some other types of drugs. In 1994, LSD seizures were heavily concentrated in the following countries (listed in decreasing order): Israel, Canada, the United Kingdom and the United States (see figure 17). In addition, ICPO/Interpol reported that a significant but unknown quantity of LSD was seized in the Russian Federation.[10] Israel ranked first in reported LSD seizures, which was higher than its ranking for seizures of most other types of drugs; the same was to some extent true of Australia, Canada and South Africa. However, the partiality and variability of the data mean that these are not necessarily the principal countries involved in the illicit traffic in LSD.

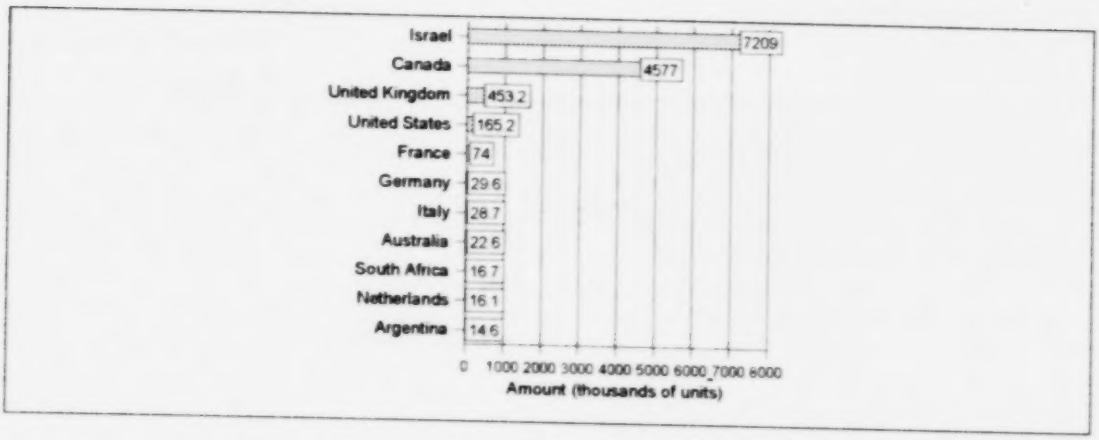
Figure 16. Lysergic acid diethylamide: global seizures, 1980-1994



Sources: Annual reports questionnaires received by the Secretary-General; and International Criminal Police Organization.

Note: Seizures reported in units have been converted to kilograms using the following equation: 1 unit = 50 mg (or 20,000 units = 1 g).

Figure 17. Lysergic acid diethylamide: seizures, by country, 1994



Sources: Annual reports questionnaires received by the Secretary-General; and International Criminal Police Organization.

Note: Only countries reporting having seized over 10,000 units are shown.

E. Precursors

34. The 22 precursors in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988[11] are substances that are frequently used in the illicit manufacture of drugs. Trafficking in substances used in the manufacture of the amphetamine-type stimulants and substances in the MDMA ("ecstasy") group is discussed in document CN.7/1996/12.

35. The traffic in substances used in the illicit manufacture of heroin and cocaine moves opposite to the traffic in the illicitly manufactured drugs, and sometimes along the same routes. Rather than provide a description of the geographical intricacies of precursor trafficking, the present subsection gives an overview of possible emerging global trends in such trafficking. The seizure data on precursors are those reported to the International Narcotics Control Board in relation to the implementation of article 12 of the 1988 Convention. Because the data are for a relatively small number of years and increasing adherence to the 1988 Convention changes reporting practices, the interpretation of the data is extremely tentative.

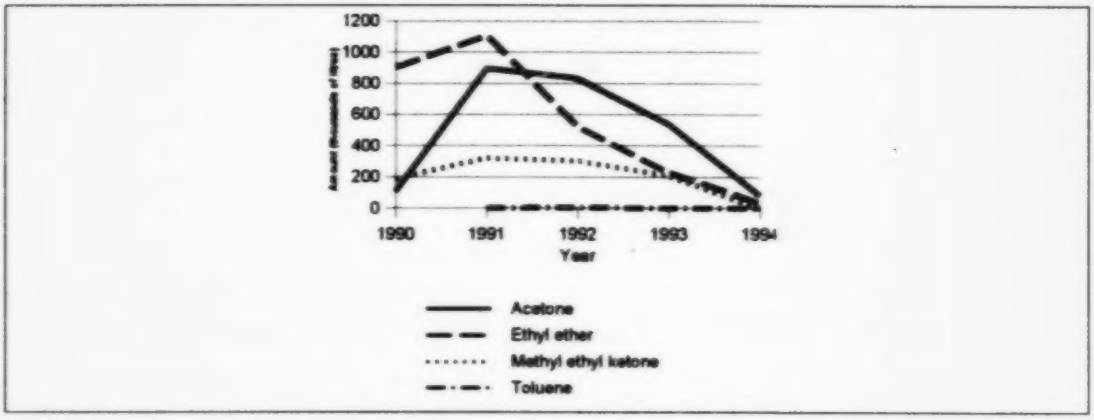
Substances used in the illicit manufacture of heroin and cocaine

36. The solvents used in the illicit manufacture of heroin and cocaine are acetone, ethyl ether, methyl ethyl ketone and toluene; the latter two were placed under international control only in 1992. The amounts of the solvents that have been reported seized have declined rapidly since they were placed under control, as shown in figure 18.

37. Hydrochloric acid and sulphuric acid are also used in the illicit manufacture of heroin and cocaine. Figure 19 shows amounts of hydrochloric and sulphuric acid reported seized between 1990 and 1994. Though those substances were not placed under international control until 1992, some of the data were collected retrospectively and the initial increases shown in figure 19 probably reflect this change in the data collection process. More recently, however, there appears to have been a drop in the amounts seized. When seizures of hydrochloric and sulphuric acid are aggregated, the reductions are even more pronounced. That is also true of seizures of the solvents, shown in figure 18, but the advantage of using the lower level of

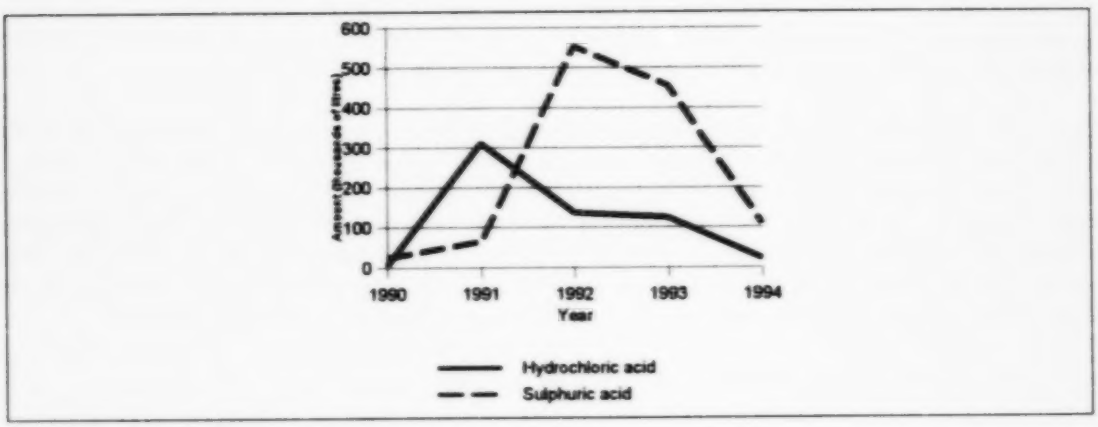
aggregation shown in figures 18 and 19 is that it demonstrates how the trend generally holds true for different precursors seized in different locations.

Figure 18. Solvents under international control: seizures, 1990-1994



Source: International Narcotics Control Board.

Figure 19. Hydrochloric acid and sulphuric acid: seizures, 1990-1994



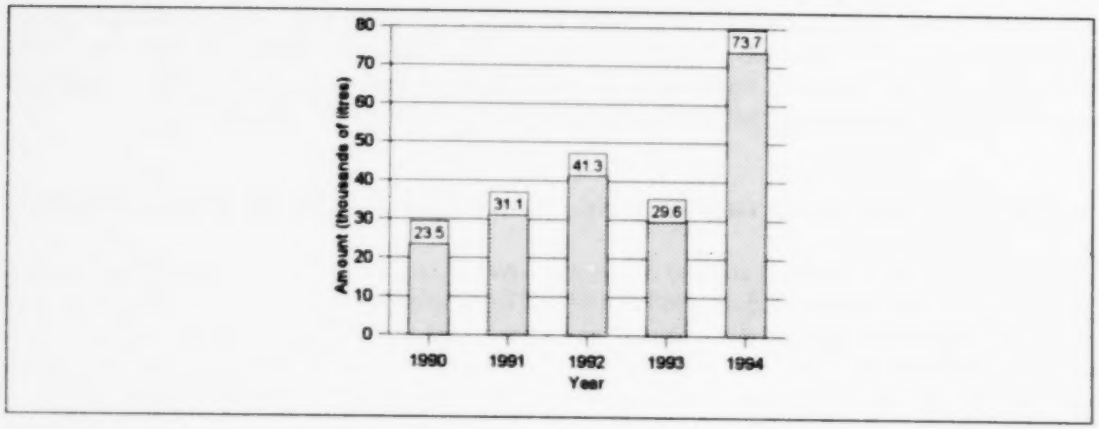
Source: International Narcotics Control Board.

38. The reductions in the amounts reported seized of both the solvents and the acids suggest four contending explanations. The first is that there may have been a reduction in illicit manufacture of heroin and cocaine, which is at odds with the evidence presented earlier in the present report. The second is that methods of illicit manufacture may have been adjusted so that smaller amounts of the precursors have been used; it has been suggested that the distilling and recycling of solvents may be taking place, as a technological response to restrictions on their availability. The third, and in many instances perhaps the more likely, explanation is that there may be a shift towards the use of substitute precursors; there are some reports that substitute solvents that are not under international control, such as methyl isobutyl ketone, which can be used in illicit cocaine manufacturing, are now being trafficked in larger amounts. A fourth interpretation is that the

amounts of the precursors being trafficked may not have changed; instead, the modus operandi and routes may have shifted to reduce the impact of tightened controls.

39. Acetic anhydride is used in the illicit manufacture of heroin and methaqualone. Seizures of acetic anhydride, shown in figure 20, in contrast with seizures of the solvents and acids discussed above, have increased in recent years. The increasing trend may reflect the targeting of acetic anhydride by law enforcement authorities. While there are substitutes for acetic anhydride, they are less readily available. Nevertheless, in south-west Asia there have been reports of suspicious movement and seizures of acetic acid, which is not under international control but is the precursor of acetic anhydride.

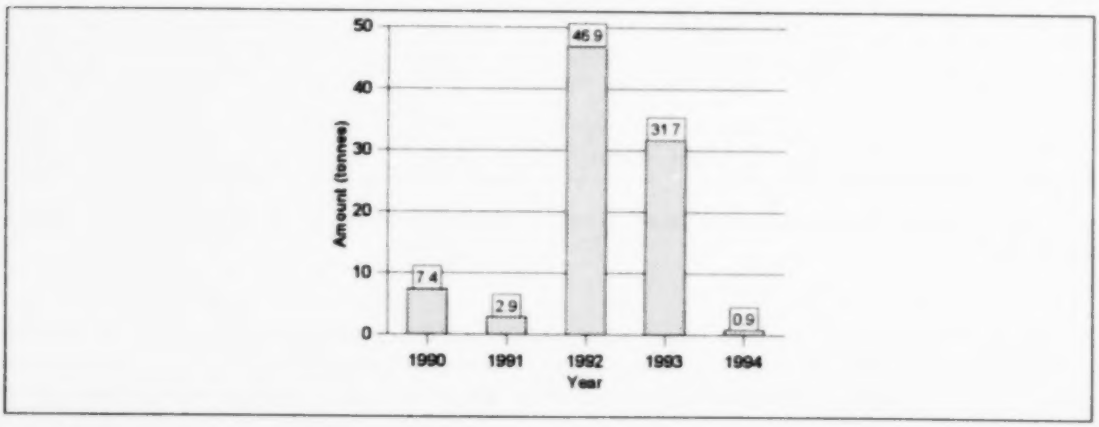
Figure 20. Acetic anhydride: seizures, 1990-1994



Source: International Narcotics Control Board.

40. Potassium permanganate is used in the illicit manufacture of cocaine from coca paste. The amount seized dropped sharply in 1994, as shown in figure 21, though the cause was unknown at the time of preparation of the present report. One advantage to having potassium permanganate under international control is that there are no available precursors of potassium permanganate, and the potential substitutes, such as hydrogen peroxide or even household bleach, while readily available, are less efficient.

Figure 21. Potassium permanganate: seizures, 1990-1994



Source: International Narcotics Control Board.

Substances used in the illicit manufacture of lysergic acid diethylamide

41. There were only five seizures of LSD precursors reported to the International Narcotics Control Board between 1990 and 1994: a single-gram seizure of ergotamine in 1990; a seizure of 300 grams of ergotamine in 1993; and three single-gram seizures of lysergic acid in 1993. It is difficult to draw conclusions regarding trafficking in these precursors, and the relatively small amounts that are required in the illicit manufacture of LSD make their detection difficult.

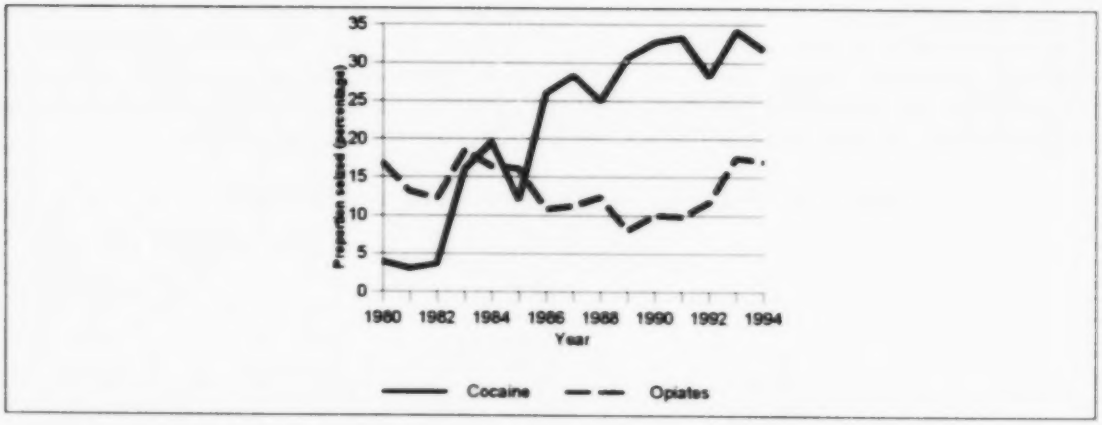
Substances used in the illicit manufacture of methaqualone

42. Prior to 1994, when 6 kilograms of *N*-acetylanthranilic acid were seized, there had been only one seizure of this precursor, of an unspecified amount in 1992, reported to the International Narcotics Control Board. Seizures of anthranilic acid are difficult to interpret in relation to trafficking, with no distinct pattern emerging from global seizures reported to the Board: nil in 1990, 389 kg in 1991, nil in 1992, 885 kg in 1993 and 102 kg in 1994. However, the trafficking in methaqualone precursors would be less prevalent if the main source of methaqualone in the illicit traffic were diversion from licit channels.

II. ACTION AGAINST DRUG TRAFFICKING: THE GLOBAL RATE OF INTERCEPTION

43. From the information in section I above it is possible to derive interception rates for opiates and cocaine, as shown in figure 22 for the period from 1980 to 1994. The interception rate presented is the percentage of the estimated opiates and cocaine manufactured that were seized (derived from figures 1 and 6). It is presented as a point-estimate, which is the mid-point of the estimated range for any given year, but which, when observed over an extended period of time, provides a relatively accurate picture of trends.

Figure 22. Opiates and cocaine: global interception rate estimates, 1980-1994



Source: United Nations International Narcotics Control Programme estimates derived from figures 1 and 6 in the present report.

44. As shown in figure 22, the global interception rate for heroin fell from around 15 per cent in 1980 to around 10 per cent, where it wavered as heroin trafficking increased from the mid-1980s to the early 1990s, and moved back to around 15 per cent in 1993 and 1994. The more recent increase could reflect a shifting of the balance of law enforcement resources towards efforts to reduce trafficking along the Balkan route. In contrast, the estimated interception rate for cocaine was much lower in the early 1980s, at less than 5 per

cent, after which it rose fairly consistently despite increased trafficking through the 1980s; it appears to have stabilized at around 30 per cent or higher in the 1990s. The differences between the interception rates for the two substances, the impact upon trafficking and consumption, and the possible policy implications are areas that deserve further investigation.

45. The difference between the interception rates, together with the increased cocaine interdiction rate, almost certainly reflect, in large part, greater emphasis on interception of international drug trafficking and the strengthening of law enforcement efforts within source countries. Between 1980 and 1994, the estimated global interception rate for cocaine increased around sixfold (see figure 22). In the same period, however, estimated cocaine manufacture tripled, and so the amount of cocaine that may have reached consumers almost doubled. The implication is that increases in drug trafficking and consumption cannot necessarily be attributed to a failure in law enforcement efforts.

46. Figure 22 suggests that, in the 1990s, around one third of the cocaine being trafficked is being intercepted. The impact upon the profitability of cocaine trafficking ought to be great. It seems rational to expect that, in time, the economic feasibility of cocaine trafficking will decline and that cocaine trafficking itself will decline along with it. The fact that such trafficking has not only continued but increased is contrary to that expectation. The most likely explanation is the huge variation in illicit drug prices in the stages between illicit production and consumption, since the bulk of the economic costs that interception efforts impose are absorbed prior to the retail distribution stage. The replacement costs of intercepted illicit drug consignments are low in relation to the profit that is made upon sale; and the wages of illicit drug couriers, while far higher than earnings to be made from licit alternatives, are small in comparison with the value of their cargo.[12] Consequently, replacement of intercepted international drug trafficking is highly likely. The interception of trafficking within source regions is attractive because shipments are larger and less dispersed than in the international traffic, though the proximity to the source means that the replacement costs of the drugs to traffickers are relatively small.

47. Rapidly increasing cocaine seizures are an indication of the immense efforts made by law enforcement agencies in the Americas in recent years. One constraint upon efforts to intercept international drug trafficking appears to be that, as some of the seized drugs are replaced, if illicit drug demand is not reduced through interception, then seizures may have the inadvertent effect of stimulating illicit cultivation. This, in turn, may diminish the impact that seizures of international trafficking might have upon illicit drug supply.

48. The reason that intercepted cocaine and heroin are replaced appears to be that, upon sale in developed countries, only a small fraction of the drugs trafficked covers the costs of the large amounts of drugs that are intercepted.* A kilo of cocaine in Colombia in 1992 cost around US$ 2,000, but had a wholesale price in the United States of US$ 11,000-42,000, and a retail value between US$ 100,000 and US$ 600,000. From such information, an interdiction rate required to drive drug trafficking out of the market might be estimated. If drug traffickers received only the middle of the range of the estimated wholesale price and each courier transported 1 kilogram of the drug and was paid US$ 4,000 per trip, only one trip would have to succeed for every three that failed in order for traffickers to break even. While prices vary over time and space, in this conservative example the interception rate would have to be at least 75 per cent to eliminate the economic viability of organized drug trafficking. This is almost certainly an underestimate. If any of the profit from retail sale returns to drug trafficking organizations, perhaps from connected cells of retail distributors, the profitability of international drug trafficking will be greater.

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*For further empirical evidence regarding the "value added" to illicit drugs between production and consumption, see the report of the Secretariat on crops from which drugs are extracted and appropriate strategies for their reduction (E/CN.7/1996/11).

49. The impact of interception efforts upon illicit drug consumption depends upon how responsive consumers are to price increases caused by reductions in illicit drug supply. It is well known that frequent drug users may be less responsive to price increases than new or casual drug users, particularly for dependence-producing drugs. Hence price increases may have only a small short-term impact, while the maintenance of longer-term reductions in illicit drug consumption are dependent upon trafficking not being able to adapt to replenish supply.

III. CONCLUSION

50. The global interdiction rate for cocaine is significantly above that for heroin, reversing the pattern of the early 1980s; that development is almost certainly due to greater law enforcement efforts. However, the mechanisms of the illicit market are such that the impact upon the amount of cocaine reaching consumers is less significant. Further exploration of these and related issues may assist the Commission on Narcotic Drugs in its efforts to monitor the implementation of those aspects of the international drug control treaties that relate to illicit drug trafficking.

51. Cannabis production and trafficking are less readily quantifiable than heroin and cocaine manufacture and trafficking. There is evidence suggesting that trafficking in cannabis resin has increased in recent years compared with trafficking in cannabis herb. It is possible that international trafficking in cannabis could decline if indoor hydroponic cultivation of cannabis for domestic consumption continues to increase in many developed countries. Further examination of the extent and importance of indoor cannabis cultivation might provide useful information in this respect.

52. There has been a dramatic increase in seizures of methaqualone and other depressants, which may indicate increased trafficking in those substances. While the extent to which different illicit drugs compete with one another is largely unknown, it is possible that increasing traffic in substances in the amphetamine-type stimulant group could have an impact upon cocaine trafficking in the longer term.

53. Trafficking in certain precursors may have declined in recent years, perhaps as a result of improved drug control efforts since the adoption of the 1988 Convention. There is a strong possibility, however, that this reflects a shifting towards the use of substitute products or other manufacturing techniques.

Notes

[1]World Customs Organization, "Report of the seventh meeting of the WCO joint customs/business working group on 'Action' (Alliance of Customs and Trade for the Interdiction of Narcotics) and 'Defis' (Douanes et enterprises face au trafic illicite de stupéfiants)", September 1995, annex II.

[2]International Criminal Police Organization, *Global Heroin Challenge: Changing Scenario, 1995* (1995), p. 1.

[3]International Criminal Police Organization, *The European Heroin Scene: Balkans; The New Corridors, 1994*.

[4]United States of America, National Narcotics Intelligence Consumers Committee, *The NNICC Report 1994: The Supply of Illicit Drugs to the United States* (August 1995), p. 31.

[5]International Criminal Police Organization, *Global Heroin Challenge* ..., pp. 8 and 16.

[6]Ibid., pp. 9-10.

[7]World Customs Organization, "Report of the seventh meeting of the WCO joint customs/business working group on 'Action' (Alliance of Customs and Trade for the Interdiction of Narcotics) and 'Defis' (Douanes et entreprises face au trafic illicite de stupéfiants)", September 1995, p. 1.

[8]United States of America, Department of Justice, Drug Enforcement Administration, Illicit Drug Trafficking and Use in the United States (September 1993), p. 15.

[9]South Africa, National Crime Investigation Service, *A Perspective of the Extent of the Cultivation and Trafficking of Cannabis (Dagga) in South Africa and the Combating of Cannabis Related Offences in the Region* (Pretoria, August 1995).

[10]International Criminal Police Organization, *National Statistics on Illicit Drug Production, Traffic and Use in 1994* (July 1995), p. 41.

[11]*Official Records of the United Nations Conference for the Adoption of a Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Vienna, 25 November-20 December 1988*, vol. I (United Nations publication, Sales No. E. 94.XI.5).

[12]See United Nations International Drug Control Programme, "Cocaine and heroin trafficking and prices in Europe, 1983-93", discussion paper, August 1994; P. Reuter and M.A.R. Kleiman, "Risks and prices: an economic analysis of drug law enforcement", *Crime and Justice: An Annual Review of Research*, M. Tonry and N. Morris, eds. (Chicago, University of Chicago Press 1986), vol. 7; and P. Reuter, *Quantity Illusions and Paradoxes of Drug Interdiction: Federal Intervention into Vice Policy* (Santa Monica, California, Rand Corporation, 1989).